E/T (Everything/Tactical) Lights

E/T LIGHT
EVERYTHINGTACTICAL.COM

Southwest Synergistic Solutions, LLC
CAGE Code 64U68
Small Minority owned business
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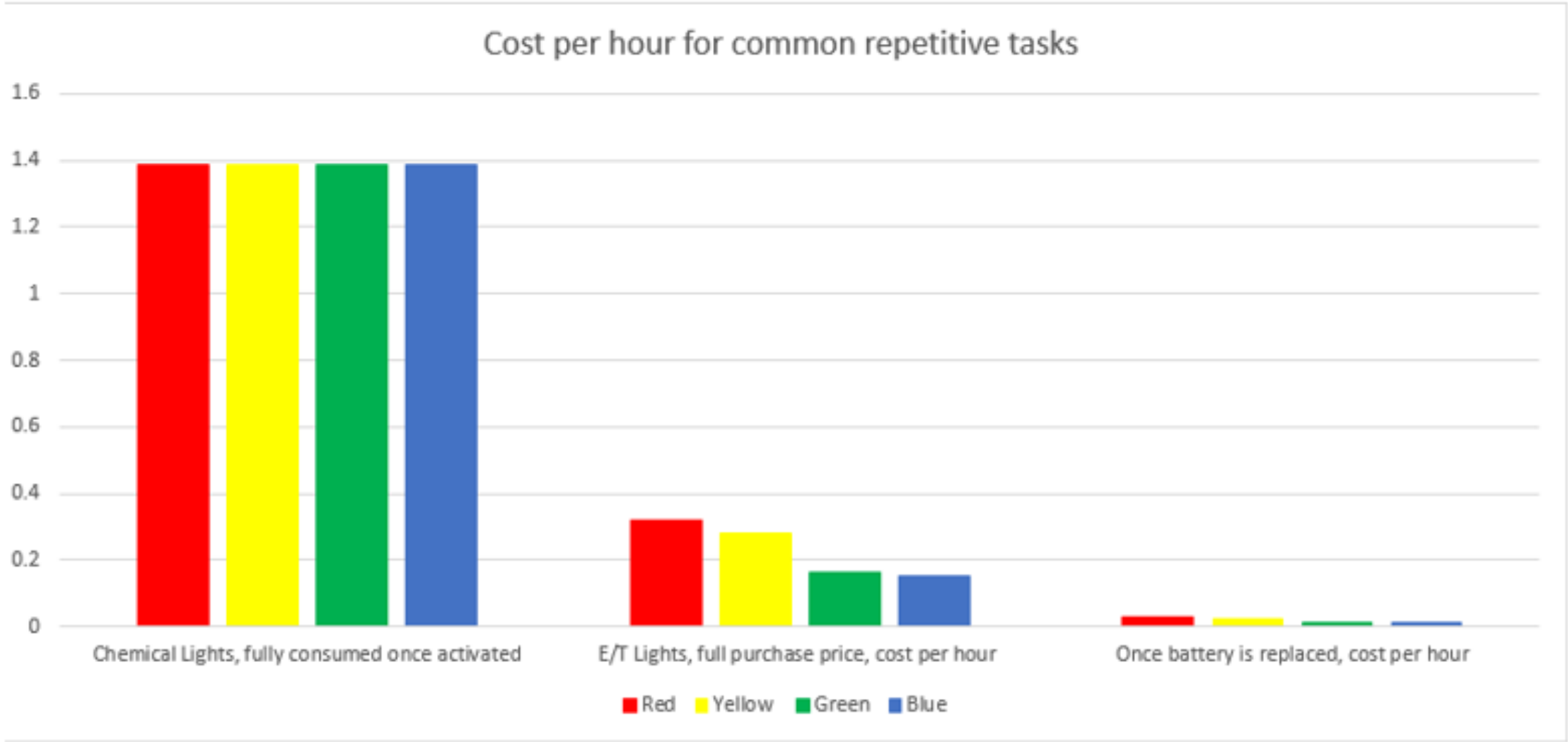
What are E/T Lights?

- E/T Lights were developed at the request of a JSOC combat medic. The issue was carrying too much gear (4 bags of chemical lights). What he needed was a one-handed operation device that contained all the triage colors.
- E/T Lights combine 4 colors in one device. IR/R/G/B or R/Y/G/B.
- E/T Lights function in all austere environments & are combat proven.
- E/T Lights are a multi-use illuminated marker that make great augmentation to one time use chemical lights.
- E/T Lights are included in UA's 269C & 1374
- E/T Lights have passed MIL-STD 810 testing for explosive atmosphere, Luminous Flux, Spectral Output, Runtime, Shock, Immersion, Low-Temperature Operation, High-Temperature Operation, Humidity, & Salt Fog.
- E/T Lights are preferred by soldiers 63% vs. 37% for chemical lights (US Army report).
- E/T Lights are easily attachable to helmet straps, MOLLE, equipment, etc…
- E/T Lights can be turned off if needed, chemical lights cannot.

JIFX 17-3 E/T Light vs. Chemlight experiment findings

- Chemical lights (6” Green only) are utilized for ~52,960,508 tasks per year.
- Chemical lights freeze and won’t function properly at temperatures below 32 degrees F.
- Chemical lights (6” Green only) generate ~2,889,525 lbs. of plastic/chemical waste per year.
- Chemical lights (6” Green only) generate ~103,438 cubic feet of plastic/chemical waste per year.
- Chemical lights must be completely spent even though only a few minutes of use may be required. Wasted capability.
- Chemical lights are more expensive per hour of actual use. See following chart



	Red	Yellow	Green	Blue
Chemical Lights, fully consumed once activated	1.39	1.39	1.39	1.39
E/T Lights, full purchase price, cost per hour	0.32	0.28	0.16	0.15
Once battery is replaced, cost per hour	0.03	0.02	0.01	0.01

- Chemical lights weigh more for the same 4 color capability.

Red 223.2g vs. 43.2g
Yellow 257.92g vs. 43.2g
Green 456.32g vs. 43.2g
Blue 706.8g vs. 43.2g

- Chemical lights take up more volume for the same 4 color capability.

Red 30.375 cubic inches vs. 3.3955 cubic inches
Yellow 35.1 cubic inches vs. 3.3955 cubic inches
Green 62.1 cubic inches vs. 3.3955 cubic inches
Blue 96.1875 cubic inches vs. 3.3955 cubic inches

JIFX 17-3 Stakeholder Comments

Stakeholder Evaluation(s):

Do you consider yourself to be a Subject Matter Expert?

1. Yes
2. No
3. Yes
4. No
5. No
6. Yes
7. No

Is this Experiment Relevant?

1. Yes
2. Yes
3. Yes
4. Yes
5. Yes
6. Yes
7. Yes

What Areas of the RFI does this experiment relate to?

1. C3. Small Vessel Cooperative Identification and Tracking (SVCT) and Non-Cooperative Vessel Imaging and Tracking (NVIT), E2. Maritime Domain Awareness
2. No response
3. I2. Deployable Lighting Technologies
4. I2. Deployable Lighting Technologies, I3. Energy efficiencies
5. F1. Non-combatant Evacuation Operations (NEO)
6. D5. Location, Tracking and Communication Technologies F1. Non-combatant Evacuation Operations (NEO) F2. Interoperable Communication Solutions in Network Denied Disaster Response Environments
7. E3. Improved Situational Awareness and Collaborative Tools/Applications for Synchronized Execution F1. Non-combatant Evacuation Operations (NEO) H1. Signature Reductions and Management I2. Deployable Lighting Technologies

Additional areas not listed above?

1. No response
2. No response
3. No response
4. No response
5. No response
6. Rapid visual patient tracking, marking for night operations, friendly troop
7. No response

How much of an improvement is this technology over existing solutions?

1. High
2. Medium
3. High
4. Medium
5. High
6. High
7. High

What are the observable strengths of this technology?

1. Physical Size, Physical Weight, Physical Robustness, Cost of Unit/System, Other
2. No response
3. Physical Size, Physical Weight, Power Requirements, Operating Endurance, Scalability to Multiple Units/Users, Ease of Integration
4. Physical Robustness, Operating Endurance, Usability/Intuitiveness, Complies with Existing Standards
5. Physical Size, Physical Weight, Physical Robustness, Power Requirements, Operating Endurance, Usability/Intuitiveness, Training Requirements
6. Physical Size, Physical Weight, Physical Robustness, Speed of Deployment, Usability/Intuitiveness, Scalability, Ease of Integration
7. Physical Size, Physical Weight, Physical Robustness, Power Requirements, Operating Endurance, Resilience to user during failure conditions, Speed of Deployment, Usability/Intuitiveness, Training Requirements, Scalability, Ease of Integration, Ability to operate in isolation

Additional strengths not listed before?

1. With this unit, the need to use 4-8 chemlights per CRRC per day over a 2 week training package could make a huge difference in money, weight, and overall space used for transportation.
2. Better visibility, longer life, resuable, less waste
3. No response
4. No response
5. No response
6. No response
7. No response

Does this experiment represent a new approach to bridging a capability gap?

1. No
2. Yes
3. No
4. No
5. Yes
6. Yes
7. Yes

Did the experimenters modify current technology for a new application?

1. Yes
2. Yes
3. Yes
4. Yes
5. No
6. Yes
7. Yes

Did the experiments collaborate with other experiments on a potential solution?

1. No response
2. No response
3. No
4. Yes
5. No
6. Yes
7. Yes

Additional Comments

1. No response
2. So these comments just apply to the LED lights in general for both G-1 and I-1. Clearly these lights are better quality than the chem lights currently used. The fact that they have long battery life and can be turned on and off makes them a no brainer.
3. Lights can coexist with with chem lights. Cannot replace chemlight but can help supplement the use of chem light would be good for repeated task where you could collect the light at a later time.
4. No response
5. This item wont fully replace chem lights, but there are multiple situations where small reusabld lights would be useful, such as: in amphib ops, marking lines in a FOB, as a buzzsaw for marking an LZ.
6. Great product w a growing listof uses. Would like to bring down to Camp Pendleton for use at 1st Recon Bn for use/integration during a reconnaissance and amphibious package.
7. Very practical improvement over Chem lights in brightness, endurance and form factor. Potentially superior in terms of cost and environmental impact as well.

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Extended Ground-Based Visibility Evaluation Everything Tactical (E/T) Lights

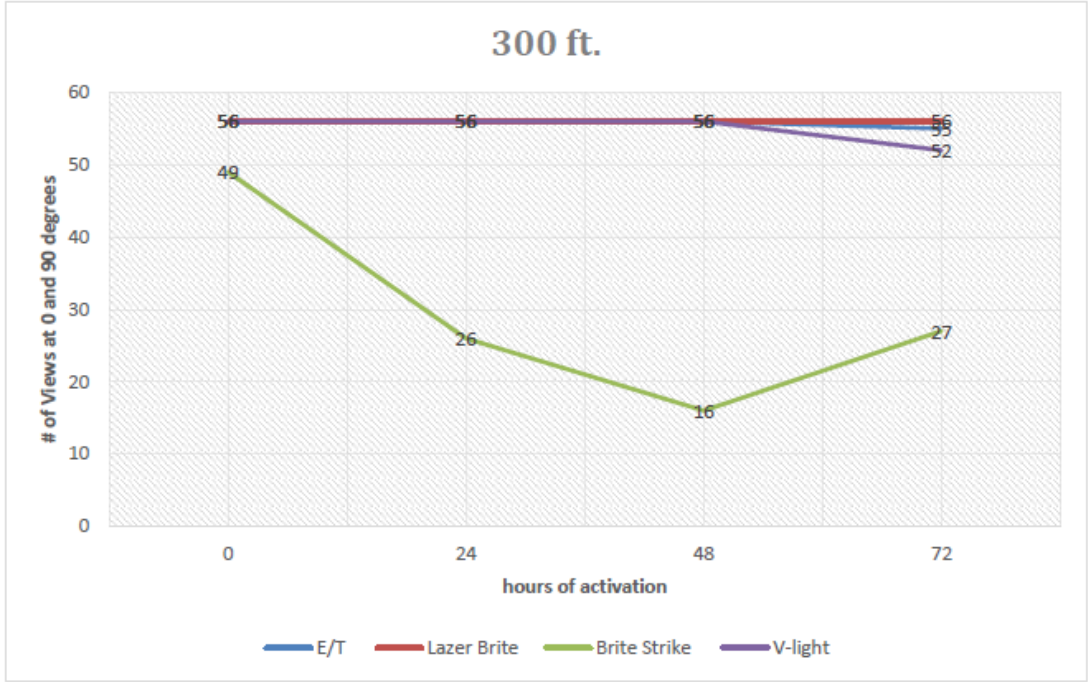
E/T Lights completed testing at November 27th, 2018. Over an activation period of 0 to 72 hours the E/T lights had a better visual performance than the top 4 leading competitors:

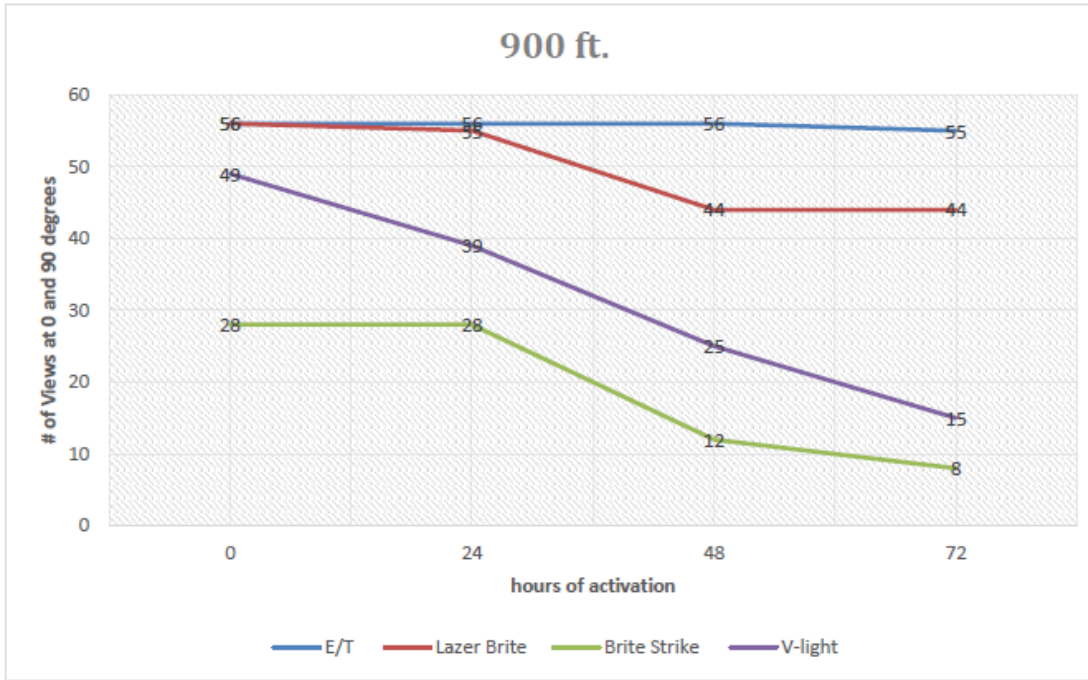
- Lazer-Brite
- Night Ize
- V-Light
- Bright-Strike

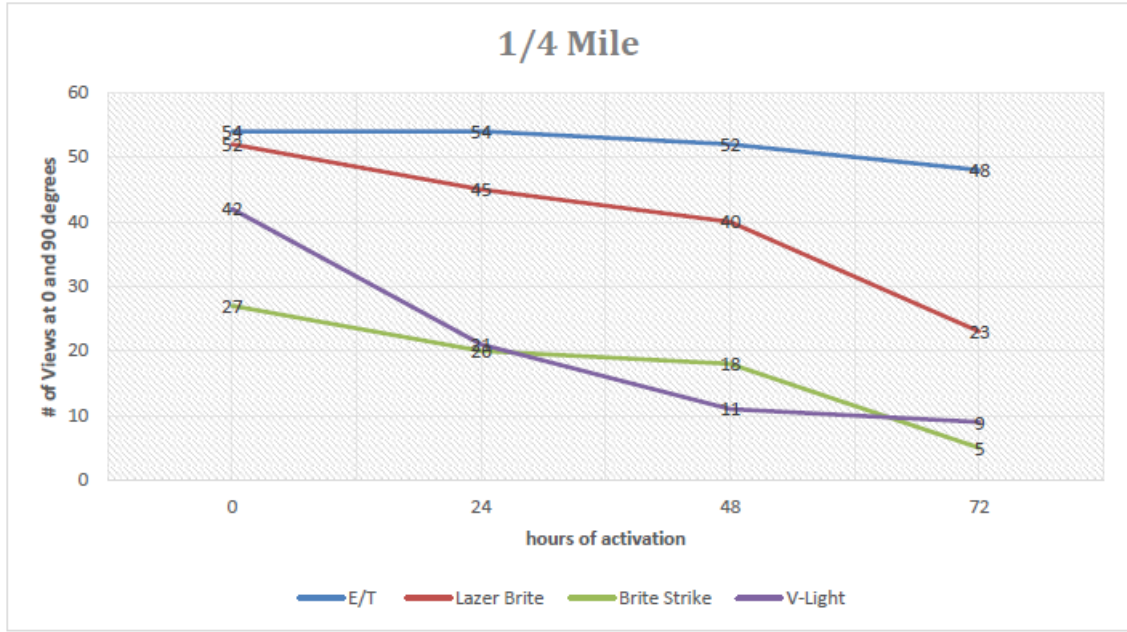
The following test in an extension of the report titled "In-Situ Evaluation of the Southwest Synergistic Solutions E/T (Emergency/Tactical) Light" previously completed as a part of the Defense to Response (D2R) Program. Stage II of this report evaluated the ground-based visibility of the E/T Light against several brands of chemical lights. The following test report re-created the variables of the first, but with a distance comparison of the top four competing products to the E/T Light. Please refer to the included testing document for all details regarding the first phase of product testing.

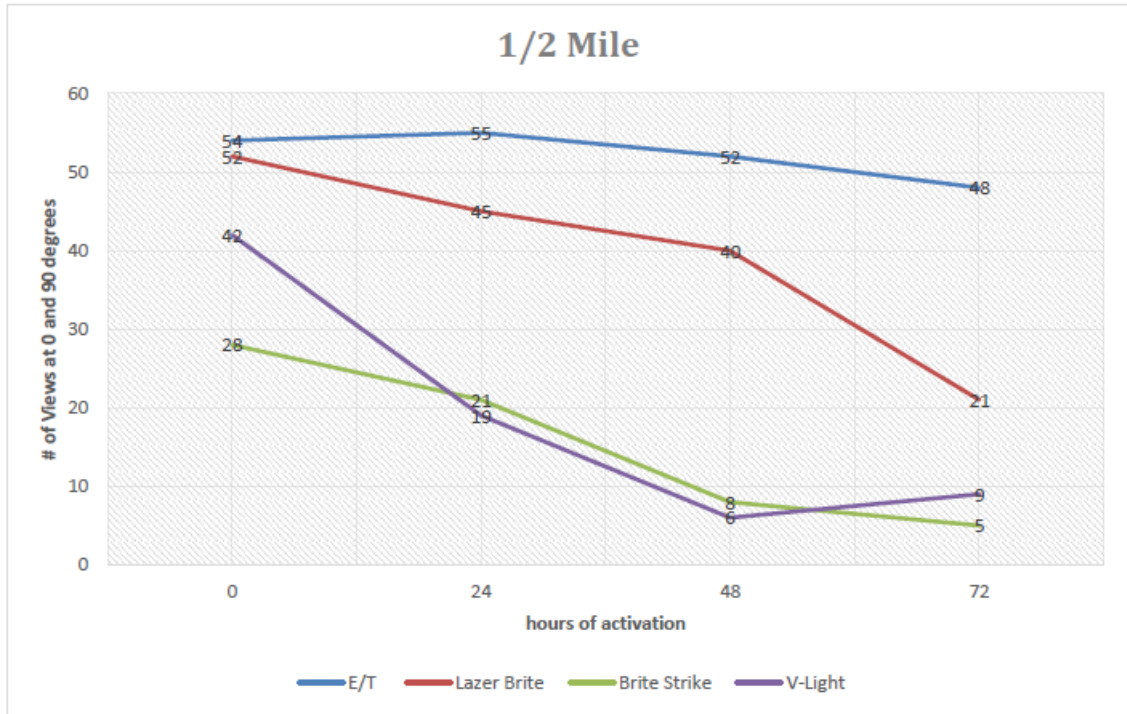
This test extension was executed on November 27th, 2018 evaluation, occurred at night at a remote, rural site in College Station, Texas. This location, a construction site for a new roadway, was selected due its flat, straight-line visibility with minimal ambient light. Figure 1 shows a picture of the selected site during the daylight.

Figure 1


300 ft.
# of Views at 0 and 90 degrees
60
50
40
30
20
10
0
56
56
56
56
55
52
49
26
16
27
0
24
48
72
hours of activation
E/T
Lazer Brite
Brite Strike
V-light


900 ft.
# of Views at 0 and 90 degrees
60
50
40
30
20
10
0
56
56
56
55
55
49
44
44
39
28
28
25
15
12
8
0
24
48
72
hours of activation
E/T
Lazer Brite
Brite Strike
V-light


1/4 Mile
# of Views at 0 and 90 degrees
60
50
40
30
20
10
0
54
54
52
52
45
42
40
27
23
20
18
11
9
5
0
24
48
72
hours of activation
E/T
Lazer Brite
Brite Strike
V-Light


1/2 Mile
# of Views at 0 and 90 degrees
60
50
40
30
20
10
0
54
55
52
52
45
42
40
28
21
21
19
8
9
6
5
0
24
48
72
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E/T
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Conclusions

For all colors the E/T Lights overall had more positive visibility identifications than the competitors tested against it. This was especially evident at greater distances and longer activation times.

E/T Light- It can be seen from each chart that the E/T light is able to maintain slope value closest to zero of all the competitors, meaning that as the E/T Light is left on for up to 72 hours it remains visible.

E/T Light Slope	
300ft	-0.0125
900ft	-0.0125
1/4 Mile	-0.08333
1/2 Mile	-0.0875

Closing

- E/T Lights offer an improvement over current options for the capabilities.
- E/T Lights lesson the weight and volume over the options for the current capabilities.
- E/T Lights reduce the cost over other options for the current capabilities.
- E/T Lights reduce the logistical costs related to chemical lights
- E/T Lights are a greener alternative to currently over-used chemical lights.
- E/T Lights function in all austere environments. Our warfighters should be equipped with tools that function at freezing temperatures. During winter warfare the current chemical lights will not function

CAPABILTY STATEMENT

Southwest Synergistic Solutions, LLC designs, manufactures and sells warfighter field equipment based on expressed needs and feedback from warfighters. We manufacture two products (E/T Lights and Compass Light) and represent another (S-Cut).

The E/T Lights combine four colors in one durable, long lasting, combat proven device. Designed to improve on chemical light technology, the E/T Lights accomplish the following when utilized to augment chemical light use for common repetitive tasks:

- Reduce weight for capability up to 95%
- Reduce volume for capability up to 97%
- Reduce plastics/chemical waste by over 2 million pounds per year.
- Reduce chemical light stick budget by over 90% (keep chemical lights for truly crack and forget tasks, utilize reusable E/T Lights for common repetitive tasks)
- E/T Lights function in all austere environments, chemical lights freeze and do not function.
- E/T Light turned off in emergencies
- Reduce need to resupply one time use chemical lights. Lesson logistical costs & burden.
- Bring cost per use down to 1 cent to 4 cents per hour vs. cracking the $1.50+ chemical light every time
- Reduce disposal costs associated with chemical lights.

E/T Version 6.8A – NSN 6230-01-605-9650

E/T Version 6.8IR – NSN 6230-01-605-9635

DLA Medical DAPA contract SP0200-1-H-0064 (E/T Lights), & SP0200-19-H-0005 (S-Cuts)

E/T Lights are certified an "Approved Product for Homeland Security". Vetted by DHS, "Safety Act" program.

E/T Light are designated a "Qualified Anti-Terrorism Technology (QATT)". Vetted by DHS, "Safety Act" program.

E/T Light are MIL-STD 810 tested, Army APG lab & MIL-STD 810 (Explosive Atmosphere) tested.

Included in Army Medical kits UA269C, UA1374

Compass Lights – Built for very specialized community.

SSS, LLC represent S-Cuts line of clothing removal, emergency cutout tools in the U.S.

- S-Cuts improve on shears & cutout rippers. When tested, the S-Cuts were 4X faster than shears and 2+ times faster than cutout rippers.
- Reduce weight & volume for the capability, while improving patient safety and getting them out much faster.
- NSN 6515-01-668-7095 – Model501/red
- NSN 6515-01-668-7090 – Model 701red
- NSN 6515.01.668-5393 -Model QE black
- Other NSN issued for ACP Kit & QE blue

NIACS E/T & Compass Lights – 335129, 423610
S-Cuts – 423450, 423710

Small minority owned business, State (Texas, SCTRCA) certifications: ESBE, HABE, MBE, SBE, HUB

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QUESTIONS: