

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P311722

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-6500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P311722  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 6500K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: 

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

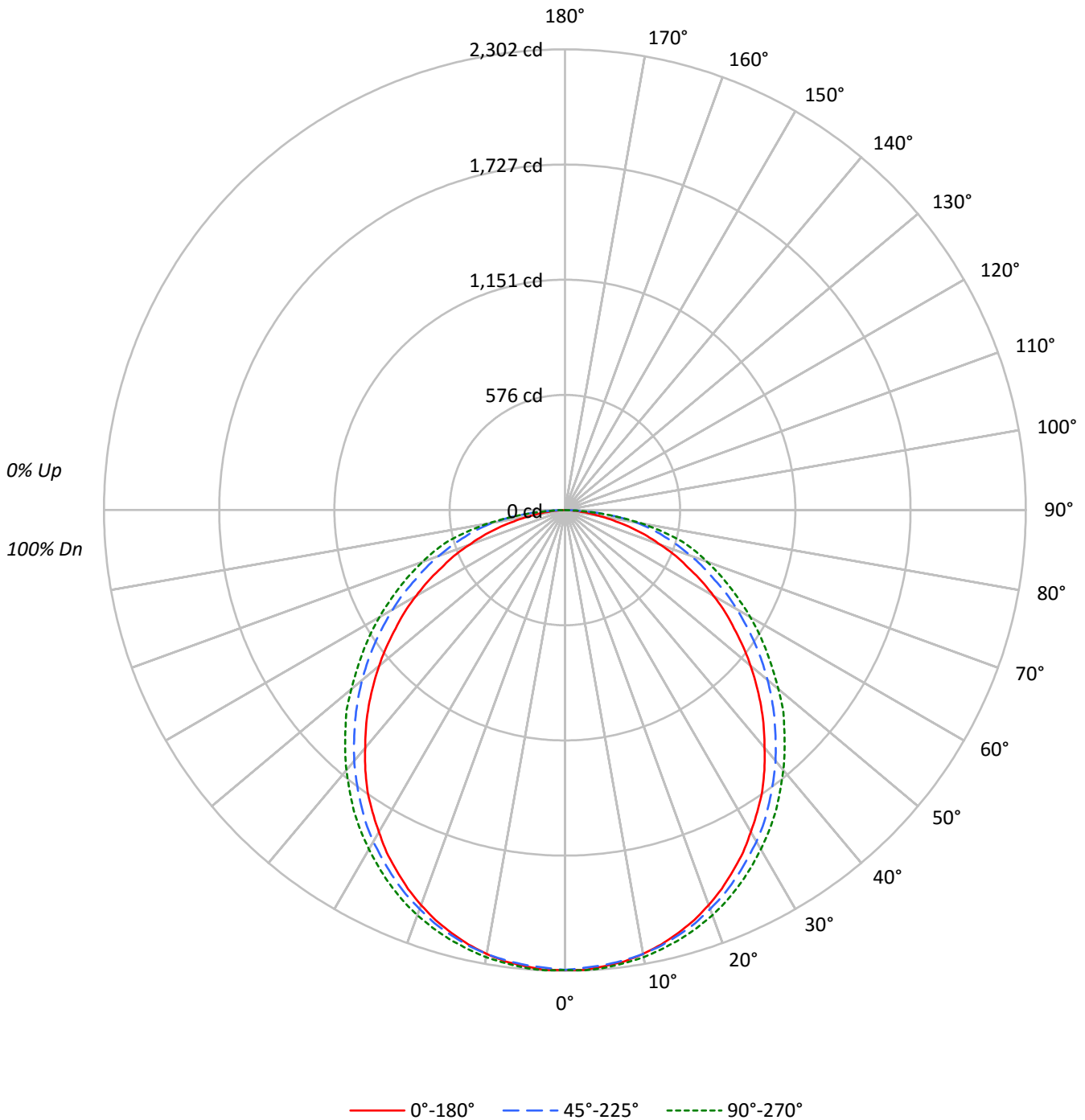
Lumens per Lamp: N/A  
Luminaire Lumens: 6540.0 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 54.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3091	3091	3091
5°	3089	3081	3100
10°	3077	3077	3099
15°	3047	3061	3093
20°	3007	3037	3084
25°	2951	3007	3066
30°	2885	2972	3040
35°	2822	2924	3016
40°	2726	2875	2981
45°	2637	2818	2949
50°	2535	2766	2913
55°	2422	2714	2885
60°	2309	2672	2879
65°	2163	2626	2897
70°	2002	2640	2975
75°	1792	2689	3143
80°	1449	2849	3075
85°	1090	2501	2438



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.5	3.3
10°-20°	621.5	9.5
20°-30°	934.3	14.3
30°-40°	1112.9	17.0
40°-50°	1139.0	17.4
50°-60°	1025.4	15.7
60°-70°	805.3	12.3
70°-80°	522.6	8.0
80°-90°	161.6	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1773.3	27.1
0°-40°	2886.1	44.1
0°-60°	5050.5	77.2
0°-90°	6540.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6540.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2298	2298	2298	2298	2298	
5°	2287	2291	2281	2293	2296	217
15°	2187	2194	2198	2216	2221	617
25°	1988	2005	2025	2059	2065	916
35°	1718	1739	1780	1824	1836	1072
45°	1386	1419	1481	1537	1550	1068
55°	1032	1078	1157	1217	1230	926
65°	679	731	825	893	910	676
75°	345	411	517	588	604	365
85°	71	131	162	158	158	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2297.5	2297.5	2297.5	2297.5	2297.5
2.5°	2299.6	2299.6	2289.2	2299.6	2301.7
5°	2287.2	2291.3	2280.9	2293.4	2295.5
7.5°	2274.7	2274.7	2268.5	2280.9	2283.0
10°	2251.8	2253.9	2251.8	2266.4	2268.5
12.5°	2222.8	2226.9	2229.0	2243.5	2245.6
15°	2187.4	2193.7	2197.8	2216.5	2220.7
17.5°	2148.0	2154.2	2164.6	2185.4	2189.5
20°	2100.2	2108.5	2121.0	2148.0	2154.2
22.5°	2048.3	2056.6	2077.3	2102.3	2112.7
25°	1988.0	2004.6	2025.4	2058.6	2064.9
27.5°	1927.8	1942.3	1969.3	2004.6	2012.9
30°	1857.1	1880.0	1913.2	1948.6	1956.9
32.5°	1788.6	1811.4	1850.9	1888.3	1898.7
35°	1718.0	1738.7	1780.3	1823.9	1836.4
37.5°	1636.9	1664.0	1709.7	1753.3	1765.7
40°	1551.8	1585.0	1636.9	1682.7	1697.2
42.5°	1470.8	1506.1	1558.0	1607.9	1624.5
45°	1385.6	1418.8	1481.1	1537.2	1549.7
47.5°	1298.3	1335.7	1402.2	1458.3	1479.1
50°	1211.1	1250.6	1321.2	1379.4	1391.8
52.5°	1123.8	1165.4	1240.2	1302.5	1308.7
55°	1032.4	1078.1	1157.1	1217.3	1229.8
57.5°	949.3	988.8	1074.0	1136.3	1150.8
60°	857.9	901.6	993.0	1051.1	1069.8
62.5°	770.7	816.4	912.0	970.1	986.7
65°	679.3	731.2	824.7	893.3	909.9
67.5°	600.4	650.2	749.9	816.4	833.0
70°	508.9	565.0	671.0	739.5	756.2
72.5°	430.0	488.2	594.1	660.6	685.5
75°	344.8	411.3	517.3	587.9	604.5
77.5°	261.7	338.6	446.6	500.6	500.6
80°	187.0	268.0	367.7	392.6	396.8
82.5°	122.6	201.5	272.1	270.1	270.1
85°	70.6	130.9	162.0	157.9	157.9
87.5°	27.0	54.0	58.2	58.2	56.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)