

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: P311813

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311813
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: 24FCZ2-75HE-UNV-L82765-S-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 6492.0 lumens
Efficiency: N/A
Efficacy: 103.4 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

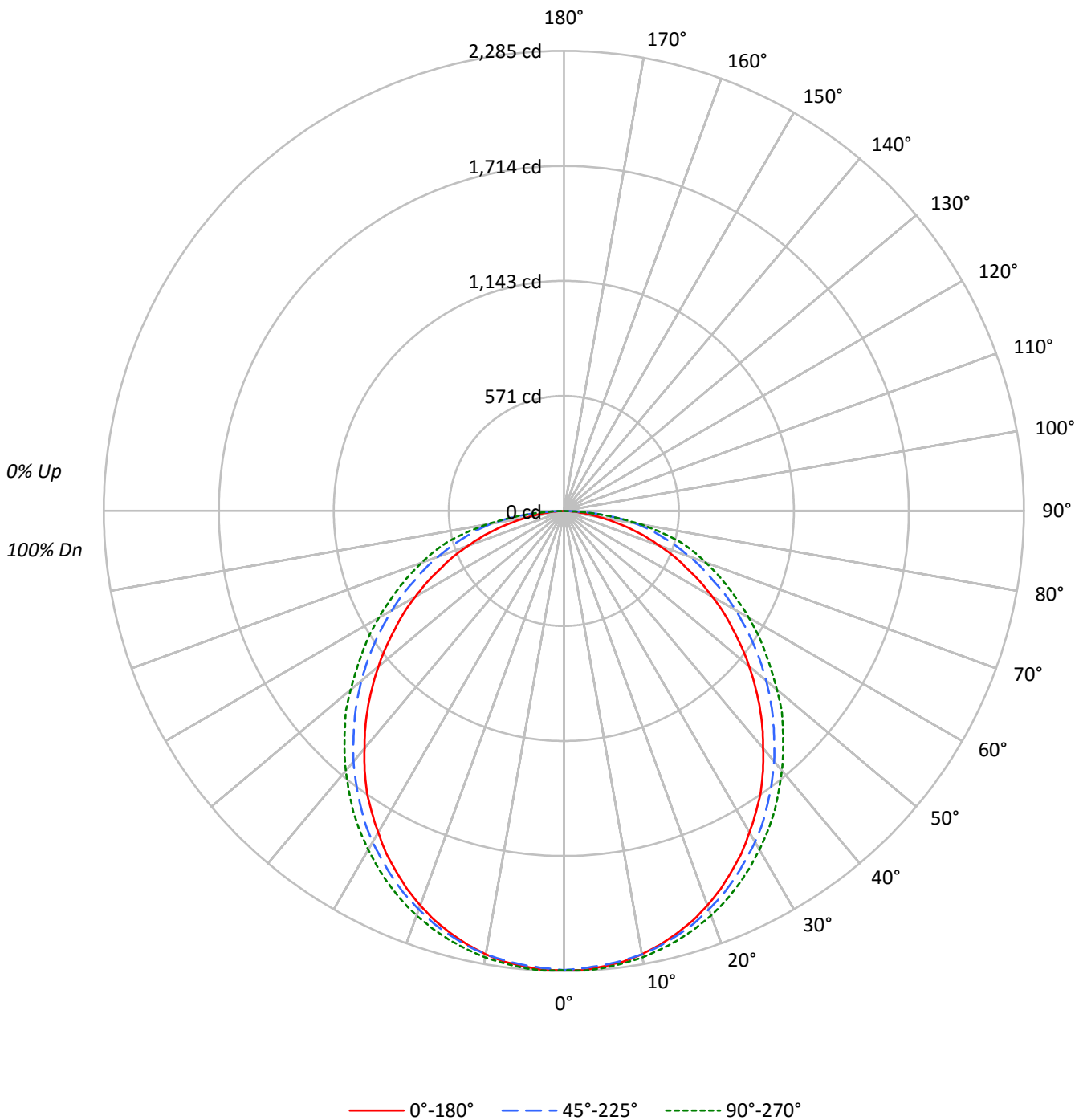
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3069	3069	3069
5°	3066	3058	3078
10°	3054	3054	3077
15°	3025	3039	3071
20°	2985	3015	3062
25°	2930	2985	3043
30°	2864	2951	3018
35°	2801	2903	2994
40°	2706	2854	2959
45°	2617	2798	2927
50°	2516	2745	2892
55°	2404	2694	2864
60°	2292	2652	2858
65°	2147	2606	2876
70°	1987	2620	2953
75°	1779	2669	3120
80°	1438	2828	3052
85°	1082	2482	2419



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.9	3.3
10°-20°	616.9	9.5
20°-30°	927.4	14.3
30°-40°	1104.7	17.0
40°-50°	1130.6	17.4
50°-60°	1017.9	15.7
60°-70°	799.4	12.3
70°-80°	518.8	8.0
80°-90°	160.4	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°	1760.3	27.1
0°-40°	2864.9	44.1
0°-60°	5013.4	77.2
0°-90°	6492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6492.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2281	2281	2281	2281	2281	
5°	2270	2274	2264	2277	2279	216
15°	2171	2178	2182	2200	2204	612
25°	1973	1990	2010	2044	2050	909
35°	1705	1726	1767	1810	1823	1064
45°	1375	1408	1470	1526	1538	1060
55°	1025	1070	1149	1208	1221	919
65°	674	726	819	887	903	671
75°	342	408	514	584	600	362
85°	70	130	161	157	157	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2280.7	2280.7	2280.7	2280.7	2280.7
2.5°	2282.7	2282.7	2272.4	2282.7	2284.8
5°	2270.4	2274.5	2264.2	2276.6	2278.6
7.5°	2258.0	2258.0	2251.8	2264.2	2266.2
10°	2235.3	2237.4	2235.3	2249.8	2251.8
12.5°	2206.4	2210.6	2212.6	2227.1	2229.1
15°	2171.4	2177.6	2181.7	2200.3	2204.4
17.5°	2132.2	2138.4	2148.7	2169.3	2173.5
20°	2084.8	2093.0	2105.4	2132.2	2138.4
22.5°	2033.2	2041.5	2062.1	2086.8	2097.2
25°	1973.4	1989.9	2010.5	2043.5	2049.7
27.5°	1913.6	1928.1	1954.9	1989.9	1998.2
30°	1843.5	1866.2	1899.2	1934.2	1942.5
32.5°	1775.5	1798.2	1837.3	1874.4	1884.8
35°	1705.4	1726.0	1767.2	1810.5	1822.9
37.5°	1624.9	1651.7	1697.1	1740.4	1752.8
40°	1540.4	1573.4	1624.9	1670.3	1684.7
42.5°	1460.0	1495.0	1546.6	1596.1	1612.6
45°	1375.4	1408.4	1470.3	1526.0	1538.3
47.5°	1288.8	1325.9	1391.9	1447.6	1468.2
50°	1202.2	1241.4	1311.5	1369.2	1381.6
52.5°	1115.6	1156.8	1231.1	1292.9	1299.1
55°	1024.9	1070.2	1148.6	1208.4	1220.8
57.5°	942.4	981.6	1066.1	1128.0	1142.4
60°	851.6	895.0	985.7	1043.4	1062.0
62.5°	765.0	810.4	905.3	963.0	979.5
65°	674.3	725.9	818.7	886.7	903.2
67.5°	595.9	645.4	744.4	810.4	826.9
70°	505.2	560.9	666.1	734.1	750.6
72.5°	426.9	484.6	589.8	655.7	680.5
75°	342.3	408.3	513.5	583.6	600.1
77.5°	259.8	336.1	443.4	497.0	497.0
80°	185.6	266.0	365.0	389.7	393.9
82.5°	121.7	200.0	270.1	268.1	268.1
85°	70.1	129.9	160.8	156.7	156.7
87.5°	26.8	53.6	57.7	57.7	55.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)