

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: P311137

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-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: P311137
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 7178.0 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

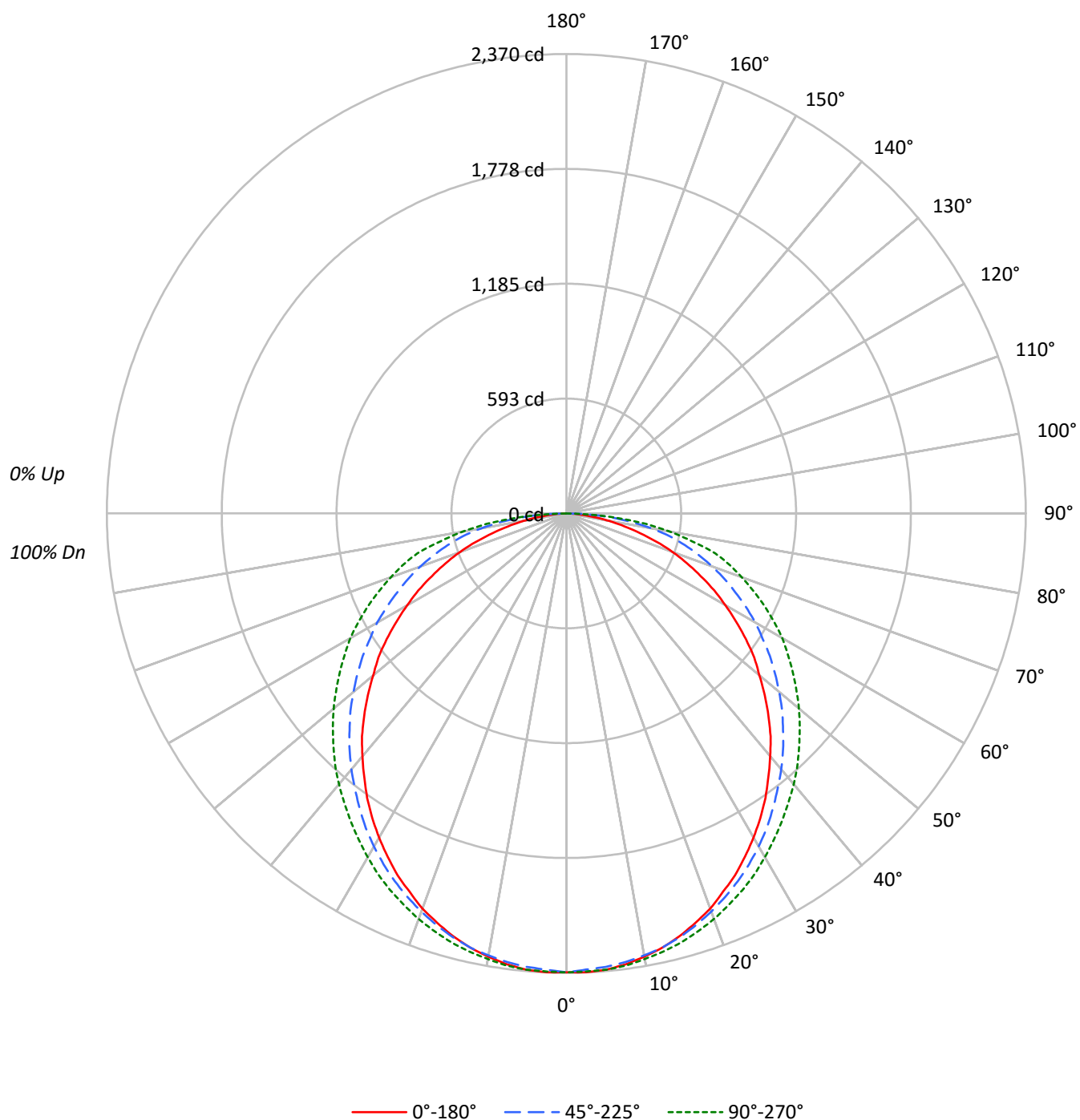
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3185	3185	3185
5°	3191	3172	3191
10°	3172	3163	3189
15°	3145	3152	3191
20°	3107	3130	3188
25°	3058	3108	3186
30°	3001	3082	3182
35°	2942	3051	3184
40°	2874	3028	3204
45°	2805	3009	3231
50°	2722	3001	3280
55°	2654	3006	3346
60°	2551	3031	3461
65°	2434	3063	3586
70°	2305	3157	3785
75°	2055	3293	4135
80°	1753	3488	4226
85°	1250	3457	4045



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.0	3.1
10°-20°	640.6	8.9
20°-30°	967.6	13.5
30°-40°	1166.1	16.2
40°-50°	1224.2	17.1
50°-60°	1145.3	16.0
60°-70°	945.8	13.2
70°-80°	644.5	9.0
80°-90°	219.8	3.1
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°	1832.2	25.5
0°-40°	2998.3	41.8
0°-60°	5367.8	74.8
0°-90°	7178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2367	2367	2367	2367	2367	
5°	2362	2360	2348	2362	2362	224
15°	2258	2260	2262	2286	2291	636
25°	2060	2070	2093	2134	2146	948
35°	1791	1810	1858	1920	1939	1119
45°	1474	1505	1581	1667	1698	1137
55°	1131	1176	1281	1386	1426	1010
65°	764	829	962	1084	1126	758
75°	395	486	634	753	795	422
85°	81	160	224	252	262	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2367.2	2367.2	2367.2	2367.2	2367.2
2.5°	2369.6	2367.2	2355.3	2367.2	2364.9
5°	2362.5	2360.1	2348.2	2362.5	2362.5
7.5°	2345.8	2345.8	2333.9	2350.6	2353.0
10°	2322.0	2322.0	2314.8	2333.9	2333.9
12.5°	2293.4	2293.4	2293.4	2312.5	2314.8
15°	2257.7	2260.1	2262.5	2286.3	2291.0
17.5°	2214.8	2219.6	2226.7	2255.3	2260.1
20°	2169.6	2174.3	2186.2	2219.6	2226.7
22.5°	2112.4	2124.3	2141.0	2179.1	2186.2
25°	2060.0	2069.6	2093.4	2133.9	2145.8
27.5°	1995.7	2010.0	2041.0	2083.8	2100.5
30°	1931.4	1945.7	1983.8	2033.8	2048.1
32.5°	1862.4	1883.8	1924.3	1976.7	1993.3
35°	1790.9	1810.0	1857.6	1919.5	1938.6
37.5°	1712.3	1738.5	1790.9	1857.6	1881.4
40°	1636.1	1664.7	1724.2	1795.7	1824.3
42.5°	1559.9	1588.5	1655.2	1736.1	1764.7
45°	1474.2	1505.1	1581.3	1667.1	1698.0
47.5°	1388.4	1426.5	1509.9	1600.4	1633.7
50°	1300.3	1343.2	1433.7	1528.9	1567.0
52.5°	1221.7	1262.2	1357.5	1459.9	1495.6
55°	1131.2	1176.5	1281.3	1386.1	1426.5
57.5°	1038.3	1088.4	1200.3	1314.6	1355.1
60°	947.8	1002.6	1126.5	1240.8	1286.0
62.5°	859.7	914.5	1043.1	1162.2	1207.4
65°	764.5	828.8	962.1	1083.6	1126.5
67.5°	674.0	743.0	883.5	1002.6	1045.5
70°	585.9	652.5	802.6	919.3	962.1
72.5°	490.6	566.8	716.8	838.3	883.5
75°	395.3	485.8	633.5	752.6	795.4
77.5°	307.2	400.1	547.8	645.4	666.8
80°	226.2	321.5	450.1	519.2	545.4
82.5°	145.3	240.5	342.9	393.0	414.4
85°	81.0	159.6	223.9	252.4	262.0
87.5°	33.3	69.1	90.5	102.4	102.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)