

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: P311135

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA125-W2A-U-5500K**

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: P311135
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-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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: 7141.0 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

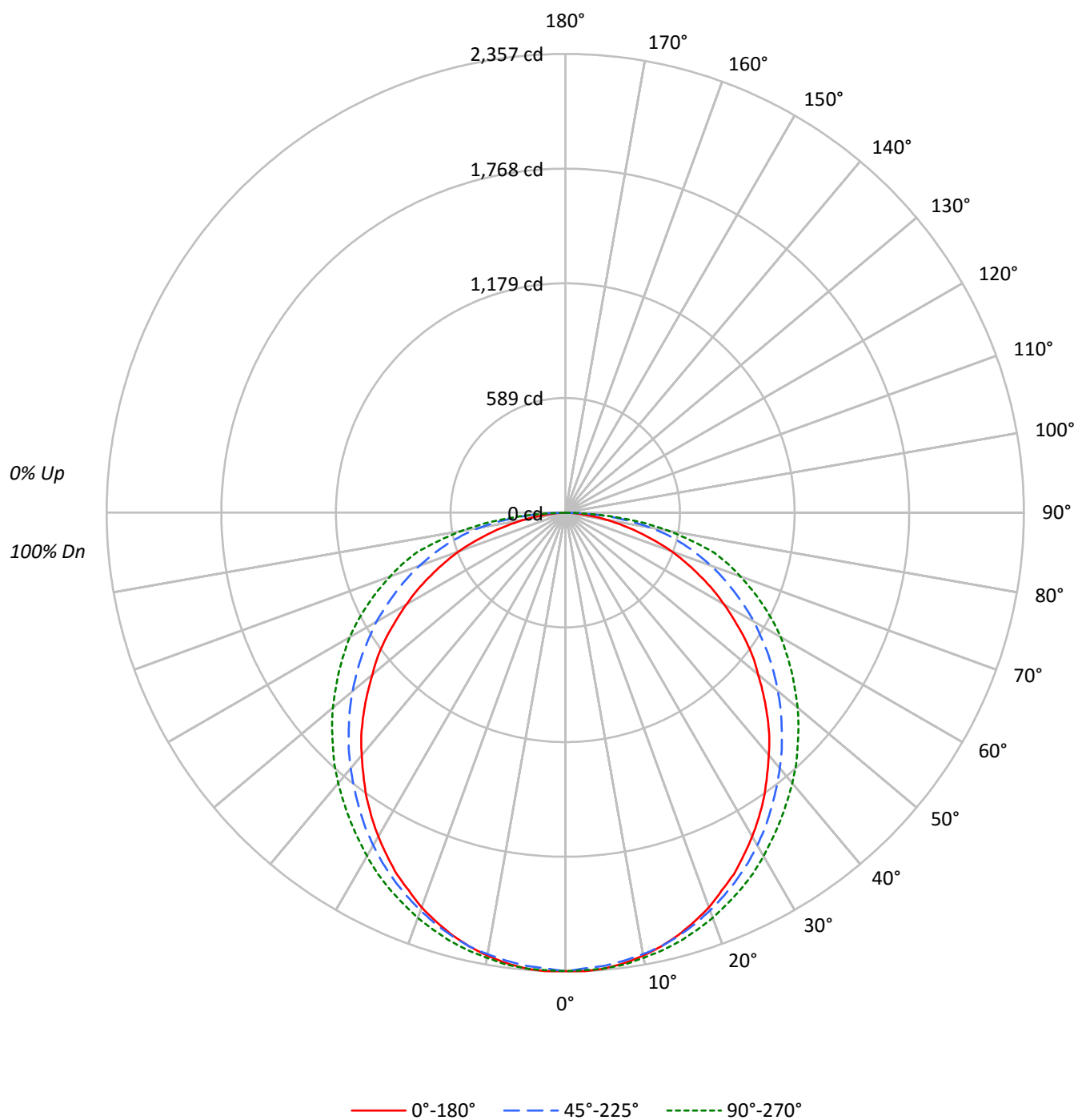
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3169	3169	3169
5°	3174	3155	3174
10°	3156	3146	3172
15°	3129	3135	3175
20°	3090	3114	3172
25°	3043	3092	3169
30°	2985	3066	3166
35°	2927	3035	3168
40°	2859	3013	3188
45°	2791	2993	3214
50°	2708	2986	3263
55°	2640	2990	3329
60°	2538	3016	3443
65°	2421	3047	3568
70°	2293	3141	3766
75°	2045	3276	4114
80°	1744	3470	4204
85°	1244	3438	4023



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.9	3.1
10°-20°	637.3	8.9
20°-30°	962.6	13.5
30°-40°	1160.1	16.2
40°-50°	1217.9	17.1
50°-60°	1139.4	16.0
60°-70°	941.0	13.2
70°-80°	641.2	9.0
80°-90°	218.7	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°	1822.7	25.5
0°-40°	2982.9	41.8
0°-60°	5340.2	74.8
0°-90°	7141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7141.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2355	2355	2355	2355	2355	
5°	2350	2348	2336	2350	2350	223
15°	2246	2248	2251	2274	2279	633
25°	2049	2059	2083	2123	2135	943
35°	1782	1801	1848	1910	1929	1113
45°	1467	1497	1573	1658	1689	1131
55°	1125	1170	1275	1379	1419	1004
65°	760	824	957	1078	1121	754
75°	393	483	630	749	791	419
85°	81	159	223	251	261	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2355.0	2355.0	2355.0	2355.0	2355.0
2.5°	2357.4	2355.0	2343.2	2355.0	2352.7
5°	2350.3	2347.9	2336.1	2350.3	2350.3
7.5°	2333.7	2333.7	2321.9	2338.5	2340.8
10°	2310.0	2310.0	2302.9	2321.9	2321.9
12.5°	2281.6	2281.6	2281.6	2300.5	2302.9
15°	2246.1	2248.4	2250.8	2274.5	2279.2
17.5°	2203.4	2208.1	2215.3	2243.7	2248.4
20°	2158.4	2163.1	2175.0	2208.1	2215.3
22.5°	2101.5	2113.4	2130.0	2167.9	2175.0
25°	2049.4	2058.9	2082.6	2122.9	2134.7
27.5°	1985.4	1999.7	2030.5	2073.1	2089.7
30°	1921.5	1935.7	1973.6	2023.3	2037.6
32.5°	1852.8	1874.1	1914.4	1966.5	1983.1
35°	1781.7	1800.6	1848.0	1909.6	1928.6
37.5°	1703.5	1729.6	1781.7	1848.0	1871.7
40°	1627.7	1656.1	1715.3	1786.4	1814.8
42.5°	1551.9	1580.3	1646.6	1727.2	1755.6
45°	1466.6	1497.4	1573.2	1658.5	1689.3
47.5°	1381.3	1419.2	1502.1	1592.1	1625.3
50°	1293.6	1336.3	1426.3	1521.1	1559.0
52.5°	1215.4	1255.7	1350.5	1452.4	1487.9
55°	1125.4	1170.4	1274.7	1378.9	1419.2
57.5°	1033.0	1082.7	1194.1	1307.8	1348.1
60°	943.0	997.5	1120.7	1234.4	1279.4
62.5°	855.3	909.8	1037.7	1156.2	1201.2
65°	760.5	824.5	957.2	1078.0	1120.7
67.5°	670.5	739.2	879.0	997.5	1040.1
70°	582.8	649.2	798.4	914.5	957.2
72.5°	488.1	563.9	713.1	834.0	879.0
75°	393.3	483.3	630.2	748.7	791.3
77.5°	305.6	398.0	544.9	642.1	663.4
80°	225.1	319.8	447.8	516.5	542.6
82.5°	144.5	239.3	341.2	390.9	412.3
85°	80.6	158.7	222.7	251.1	260.6
87.5°	33.2	68.7	90.0	101.9	101.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)