

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: P314153

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP125-W2A-U-4500K**

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: P314153
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-L83050-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 7138.0 lumens
Efficiency: N/A
Efficacy: 108.3 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

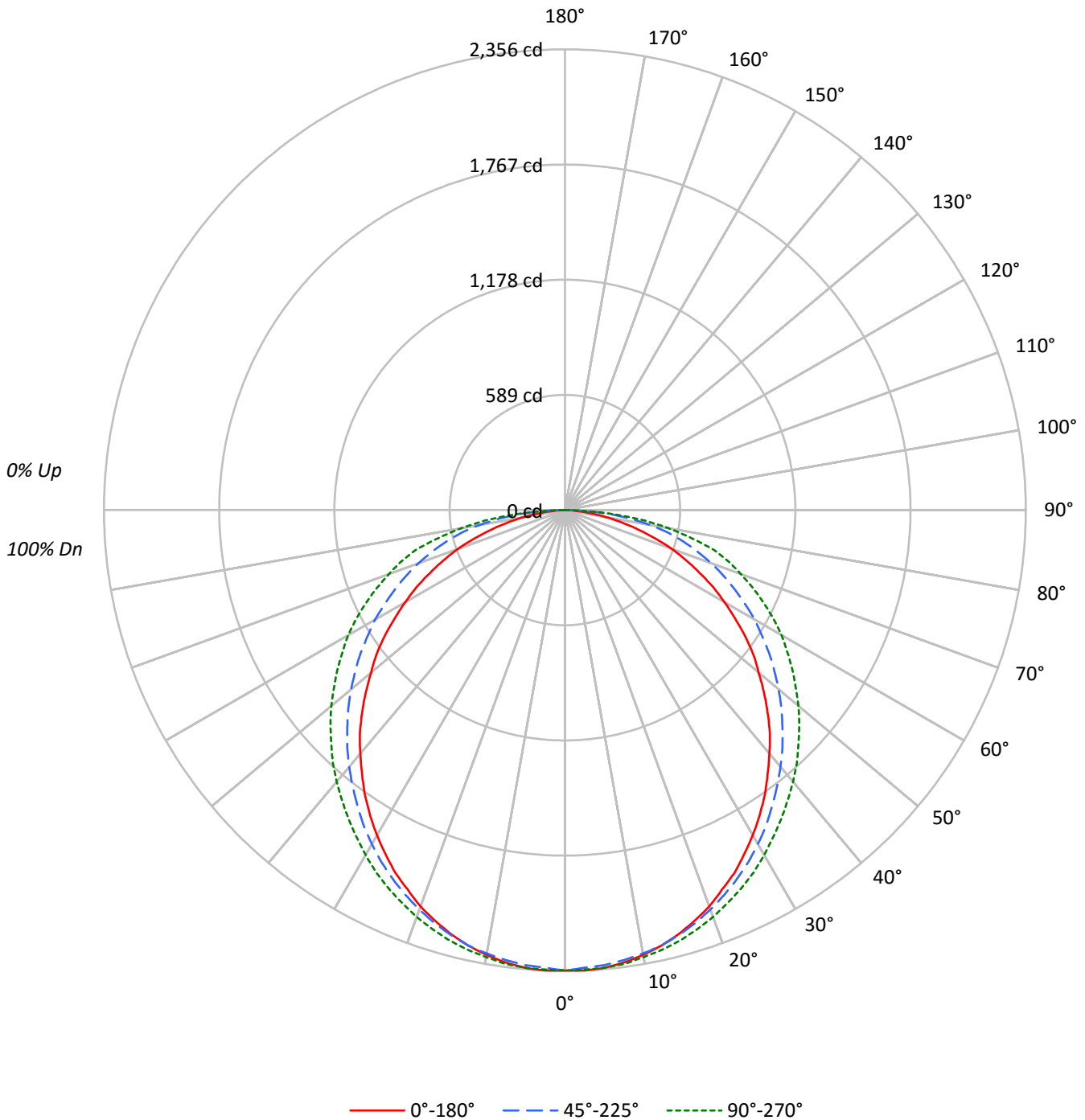
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	100	100	100	100		
	1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82	82	82	82	82	82		
	2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67	67	67	67	67	67		
	3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56	56	56	56	56	56		
	4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47	47	47	47	47	47		
	5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41	41	41	41	41	41		
	6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36	36	36	36	36	36		
	7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31	31	31	31		
	8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28	28	28	28	28	28		
	9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	25	25	25	25		
	10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23	23	23	23	23	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3167	3167	3167
5°	3173	3154	3173
10°	3155	3145	3171
15°	3127	3134	3174
20°	3089	3113	3171
25°	3041	3090	3168
30°	2984	3065	3164
35°	2925	3034	3166
40°	2858	3012	3186
45°	2790	2992	3213
50°	2707	2984	3262
55°	2639	2989	3328
60°	2537	3014	3441
65°	2420	3046	3566
70°	2292	3140	3764
75°	2044	3275	4112
80°	1743	3468	4202
85°	1243	3436	4022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.8	3.1
10°-20°	637.0	8.9
20°-30°	962.2	13.5
30°-40°	1159.6	16.2
40°-50°	1217.4	17.1
50°-60°	1138.9	16.0
60°-70°	940.6	13.2
70°-80°	640.9	9.0
80°-90°	218.6	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°	1822.0	25.5
0°-40°	2981.6	41.8
0°-60°	5337.9	74.8
0°-90°	7138.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7138.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2354	2354	2354	2354	2354	
5°	2349	2347	2335	2349	2349	223
15°	2245	2248	2250	2274	2278	633
25°	2048	2058	2082	2122	2134	943
35°	1781	1800	1847	1909	1928	1113
45°	1466	1497	1572	1658	1689	1131
55°	1125	1170	1274	1378	1419	1004
65°	760	824	957	1078	1120	754
75°	393	483	630	748	791	419
85°	80	159	223	251	260	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2354.1	2354.1	2354.1	2354.1	2354.1
2.5°	2356.4	2354.1	2342.2	2354.1	2351.7
5°	2349.3	2346.9	2335.1	2349.3	2349.3
7.5°	2332.7	2332.7	2320.9	2337.5	2339.8
10°	2309.1	2309.1	2301.9	2320.9	2320.9
12.5°	2280.6	2280.6	2280.6	2299.6	2301.9
15°	2245.1	2247.5	2249.8	2273.5	2278.3
17.5°	2202.5	2207.2	2214.3	2242.7	2247.5
20°	2157.5	2162.2	2174.1	2207.2	2214.3
22.5°	2100.6	2112.5	2129.1	2167.0	2174.1
25°	2048.5	2058.0	2081.7	2122.0	2133.8
27.5°	1984.6	1998.8	2029.6	2072.2	2088.8
30°	1920.7	1934.9	1972.8	2022.5	2036.7
32.5°	1852.0	1873.3	1913.6	1965.7	1982.2
35°	1780.9	1799.9	1847.2	1908.8	1927.8
37.5°	1702.8	1728.8	1780.9	1847.2	1870.9
40°	1627.0	1655.4	1714.6	1785.7	1814.1
42.5°	1551.2	1579.6	1645.9	1726.5	1754.9
45°	1466.0	1496.7	1572.5	1657.8	1688.6
47.5°	1380.7	1418.6	1501.5	1591.5	1624.6
50°	1293.1	1335.7	1425.7	1520.4	1558.3
52.5°	1214.9	1255.2	1349.9	1451.7	1487.3
55°	1124.9	1169.9	1274.1	1378.3	1418.6
57.5°	1032.6	1082.3	1193.6	1307.3	1347.5
60°	942.6	997.0	1120.2	1233.9	1278.9
62.5°	854.9	909.4	1037.3	1155.7	1200.7
65°	760.2	824.2	956.8	1077.6	1120.2
67.5°	670.2	738.9	878.6	997.0	1039.7
70°	582.6	648.9	798.1	914.1	956.8
72.5°	487.9	563.6	712.8	833.6	878.6
75°	393.1	483.1	630.0	748.4	791.0
77.5°	305.5	397.9	544.7	641.8	663.1
80°	225.0	319.7	447.6	516.3	542.3
82.5°	144.5	239.2	341.0	390.8	412.1
85°	80.5	158.7	222.6	251.0	260.5
87.5°	33.2	68.7	90.0	101.8	101.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)