

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: P311126

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-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: P311126
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 7166.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

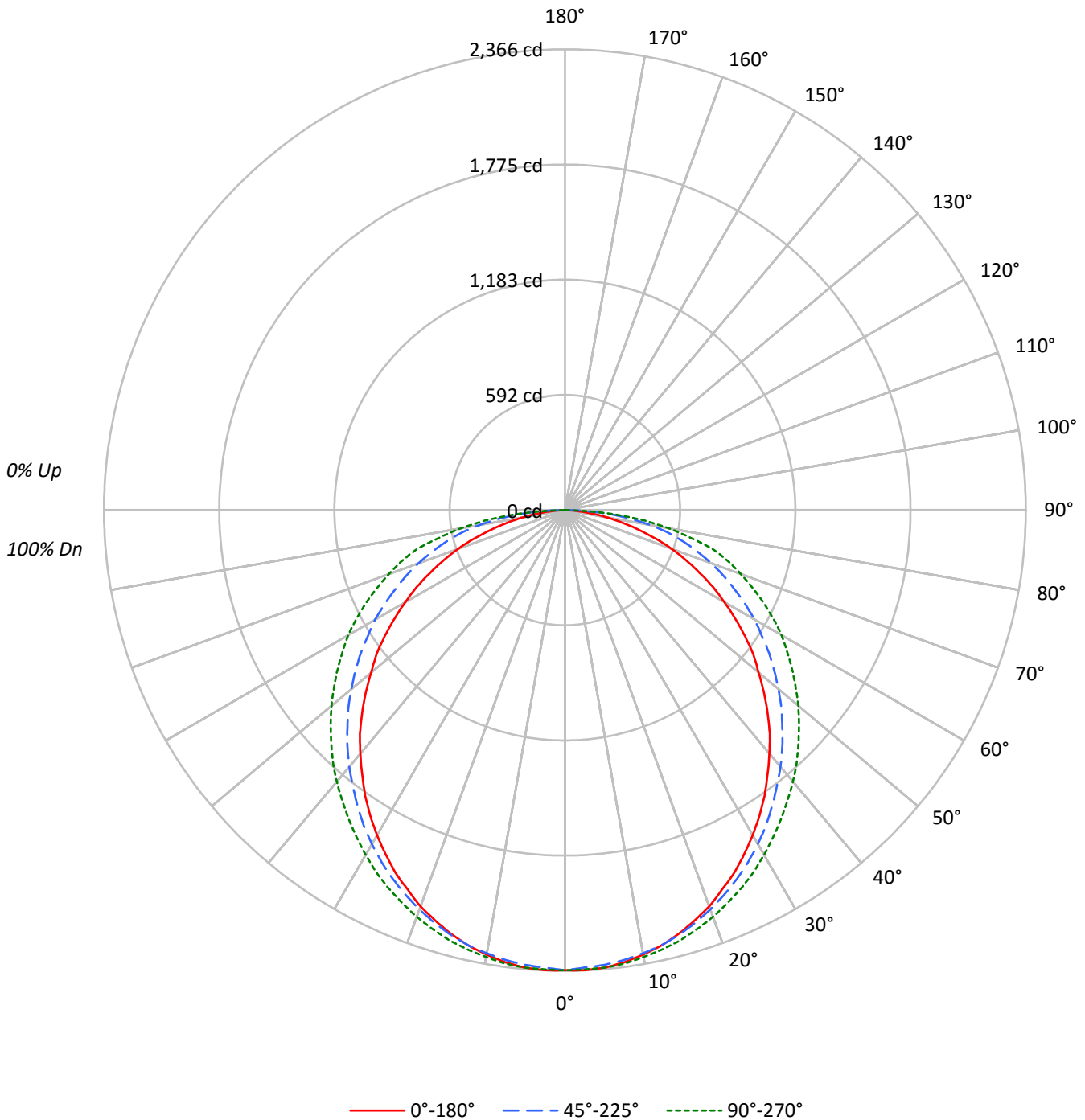
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3180	3180	3180
5°	3185	3166	3185
10°	3167	3157	3183
15°	3140	3146	3186
20°	3101	3125	3183
25°	3053	3103	3180
30°	2996	3077	3177
35°	2937	3046	3179
40°	2869	3023	3199
45°	2800	3004	3226
50°	2717	2996	3275
55°	2649	3000	3341
60°	2546	3026	3455
65°	2430	3058	3580
70°	2301	3152	3779
75°	2052	3288	4128
80°	1750	3482	4219
85°	1247	3450	4037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.7	3.1
10°-20°	639.5	8.9
20°-30°	965.9	13.5
30°-40°	1164.2	16.2
40°-50°	1222.2	17.1
50°-60°	1143.4	16.0
60°-70°	944.2	13.2
70°-80°	643.4	9.0
80°-90°	219.4	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°	1829.1	25.5
0°-40°	2993.3	41.8
0°-60°	5358.9	74.8
0°-90°	7166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2363	2363	2363	2363	2363	
5°	2358	2356	2344	2358	2358	224
15°	2254	2256	2259	2282	2287	635
25°	2057	2066	2090	2130	2142	946
35°	1788	1807	1854	1916	1935	1117
45°	1472	1503	1579	1664	1695	1135
55°	1129	1174	1279	1384	1424	1008
65°	763	827	960	1082	1125	757
75°	395	485	632	751	794	421
85°	81	159	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°	2363.3	2363.3	2363.3	2363.3	2363.3
2.5°	2365.7	2363.3	2351.4	2363.3	2360.9
5°	2358.5	2356.2	2344.3	2358.5	2358.5
7.5°	2341.9	2341.9	2330.0	2346.6	2349.0
10°	2318.1	2318.1	2311.0	2330.0	2330.0
12.5°	2289.6	2289.6	2289.6	2308.6	2311.0
15°	2253.9	2256.3	2258.7	2282.4	2287.2
17.5°	2211.1	2215.9	2223.0	2251.5	2256.3
20°	2165.9	2170.7	2182.6	2215.9	2223.0
22.5°	2108.9	2120.8	2137.4	2175.5	2182.6
25°	2056.6	2066.1	2089.9	2130.3	2142.2
27.5°	1992.4	2006.7	2037.6	2080.4	2097.0
30°	1928.2	1942.5	1980.5	2030.4	2044.7
32.5°	1859.2	1880.6	1921.1	1973.4	1990.0
35°	1787.9	1806.9	1854.5	1916.3	1935.3
37.5°	1709.5	1735.6	1787.9	1854.5	1878.3
40°	1633.4	1661.9	1721.3	1792.7	1821.2
42.5°	1557.3	1585.8	1652.4	1733.2	1761.8
45°	1471.7	1502.6	1578.7	1664.3	1695.2
47.5°	1386.1	1424.2	1507.4	1597.7	1631.0
50°	1298.1	1340.9	1431.3	1526.4	1564.4
52.5°	1219.7	1260.1	1355.2	1457.4	1493.1
55°	1129.3	1174.5	1279.1	1383.7	1424.2
57.5°	1036.6	1086.5	1198.3	1312.4	1352.8
60°	946.3	1000.9	1124.6	1238.7	1283.9
62.5°	858.3	913.0	1041.4	1160.2	1205.4
65°	763.2	827.4	960.5	1081.8	1124.6
67.5°	672.8	741.8	882.1	1000.9	1043.7
70°	584.9	651.4	801.2	917.7	960.5
72.5°	489.8	565.9	715.6	836.9	882.1
75°	394.7	485.0	632.4	751.3	794.1
77.5°	306.7	399.4	546.8	644.3	665.7
80°	225.9	321.0	449.4	518.3	544.5
82.5°	145.0	240.1	342.4	392.3	413.7
85°	80.8	159.3	223.5	252.0	261.5
87.5°	33.3	68.9	90.3	102.2	102.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)