

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: P311125

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-W2A-U-5000K**

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: P311125
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-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5000K 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: 7097.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

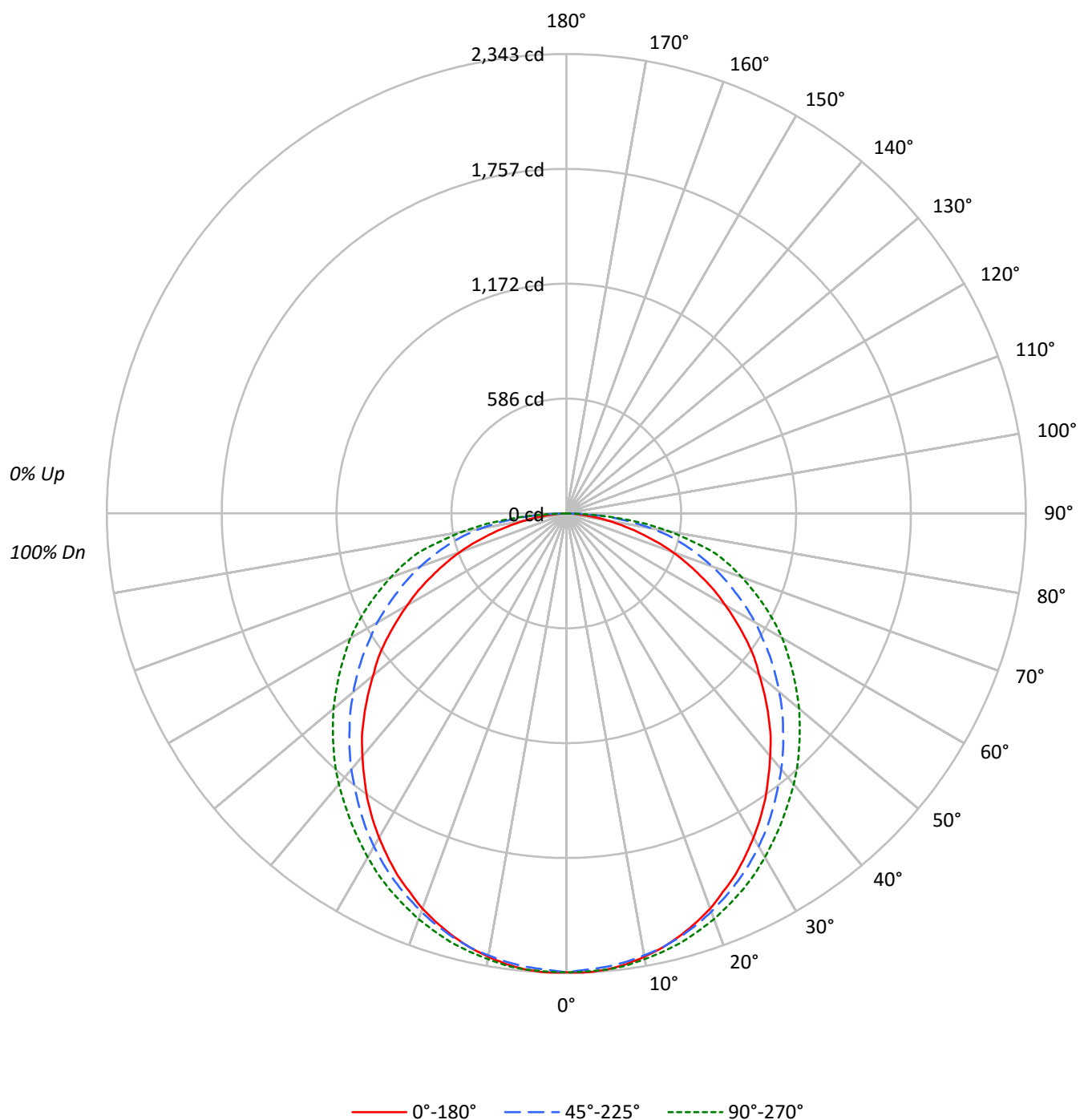
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	3149	3149	3149
5°	3155	3136	3155
10°	3137	3127	3153
15°	3109	3116	3155
20°	3071	3095	3152
25°	3024	3073	3150
30°	2967	3047	3146
35°	2908	3017	3148
40°	2841	2994	3168
45°	2773	2975	3195
50°	2691	2967	3243
55°	2624	2972	3309
60°	2522	2997	3422
65°	2406	3029	3546
70°	2279	3122	3742
75°	2032	3256	4089
80°	1733	3448	4178
85°	1237	3416	3998



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.5	3.1
10°-20°	633.4	8.9
20°-30°	956.6	13.5
30°-40°	1153.0	16.2
40°-50°	1210.4	17.1
50°-60°	1132.4	16.0
60°-70°	935.2	13.2
70°-80°	637.2	9.0
80°-90°	217.3	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°	1811.5	25.5
0°-40°	2964.5	41.8
0°-60°	5307.3	74.8
0°-90°	7097.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7097.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2340	2340	2340	2340	2340	
5°	2336	2334	2322	2336	2336	222
15°	2232	2235	2237	2260	2265	629
25°	2037	2046	2070	2110	2122	937
35°	1771	1790	1837	1898	1917	1107
45°	1458	1488	1564	1648	1679	1124
55°	1118	1163	1267	1370	1410	998
65°	756	819	951	1071	1114	750
75°	391	480	626	744	786	417
85°	80	158	221	250	259	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2340.5	2340.5	2340.5	2340.5	2340.5
2.5°	2342.9	2340.5	2328.8	2340.5	2338.2
5°	2335.8	2333.5	2321.7	2335.8	2335.8
7.5°	2319.3	2319.3	2307.6	2324.0	2326.4
10°	2295.8	2295.8	2288.7	2307.6	2307.6
12.5°	2267.5	2267.5	2267.5	2286.4	2288.7
15°	2232.2	2234.6	2236.9	2260.5	2265.2
17.5°	2189.8	2194.5	2201.6	2229.9	2234.6
20°	2145.1	2149.8	2161.6	2194.5	2201.6
22.5°	2088.6	2100.4	2116.8	2154.5	2161.6
25°	2036.8	2046.2	2069.7	2109.8	2121.5
27.5°	1973.2	1987.3	2017.9	2060.3	2076.8
30°	1909.6	1923.8	1961.4	2010.9	2025.0
32.5°	1841.3	1862.5	1902.6	1954.4	1970.8
35°	1770.7	1789.5	1836.6	1897.9	1916.7
37.5°	1693.0	1718.9	1770.7	1836.6	1860.2
40°	1617.6	1645.9	1704.8	1775.4	1803.7
42.5°	1542.3	1570.6	1636.5	1716.5	1744.8
45°	1457.5	1488.1	1563.5	1648.3	1678.9
47.5°	1372.8	1410.4	1492.9	1582.3	1615.3
50°	1285.6	1328.0	1417.5	1511.7	1549.4
52.5°	1207.9	1248.0	1342.2	1443.4	1478.7
55°	1118.5	1163.2	1266.8	1370.4	1410.4
57.5°	1026.6	1076.1	1186.7	1299.8	1339.8
60°	937.2	991.3	1113.8	1226.8	1271.5
62.5°	850.0	904.2	1031.3	1149.1	1193.8
65°	755.8	819.4	951.3	1071.4	1113.8
67.5°	666.4	734.7	873.6	991.3	1033.7
70°	579.2	645.2	793.5	908.9	951.3
72.5°	485.1	560.4	708.8	828.8	873.6
75°	390.9	480.3	626.3	744.1	786.5
77.5°	303.8	395.6	541.6	638.1	659.3
80°	223.7	317.9	445.0	513.3	539.2
82.5°	143.6	237.8	339.1	388.5	409.7
85°	80.1	157.8	221.3	249.6	259.0
87.5°	33.0	68.3	89.5	101.3	101.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)