

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: P311796

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-3000K**

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: P311796
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3000K 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: 6837.0 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

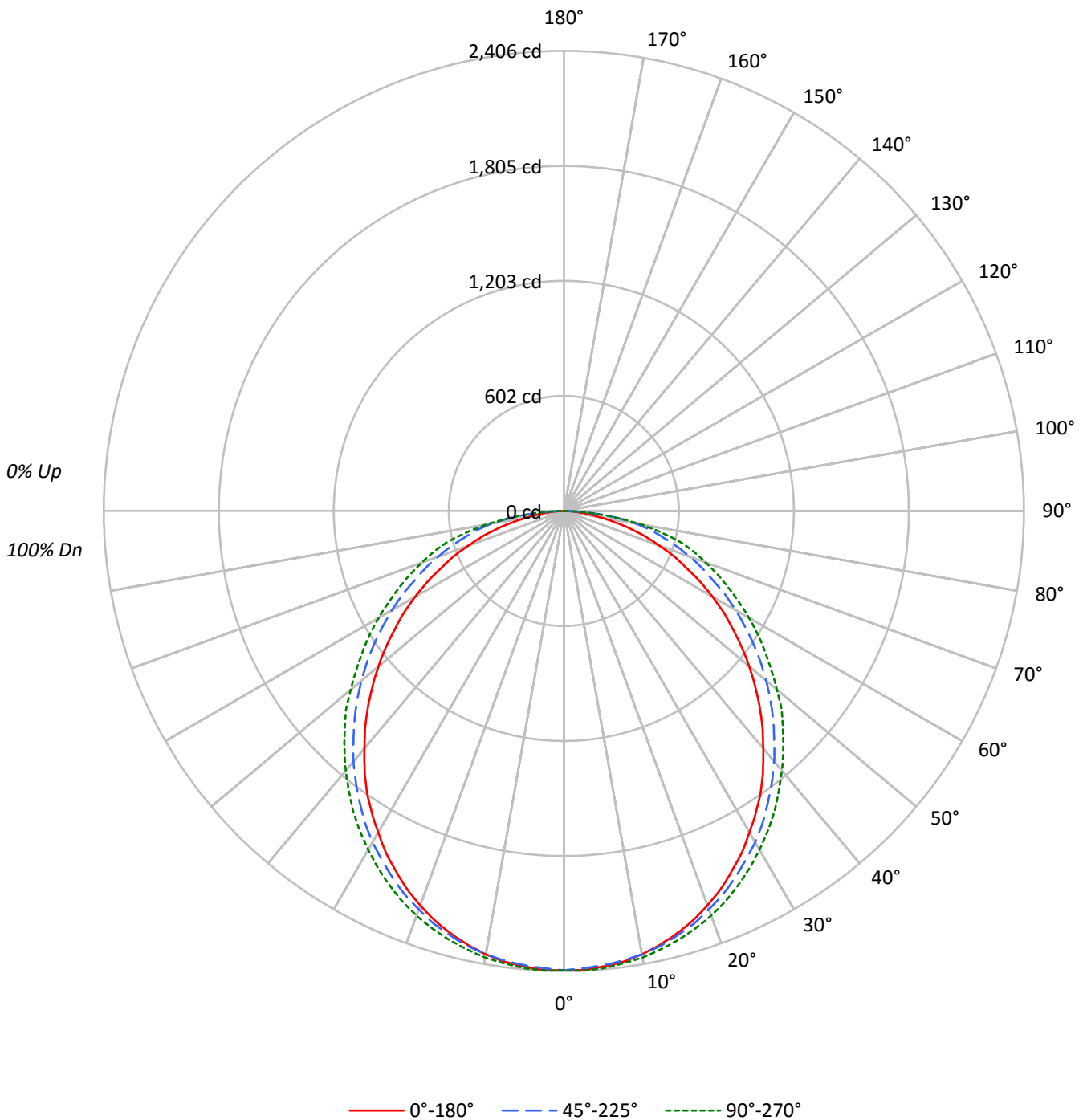
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3232	3232	3232
5°	3229	3221	3241
10°	3216	3216	3240
15°	3185	3200	3234
20°	3144	3175	3225
25°	3085	3143	3205
30°	3016	3107	3178
35°	2950	3057	3153
40°	2849	3006	3116
45°	2756	2946	3083
50°	2650	2891	3046
55°	2532	2837	3016
60°	2414	2794	3010
65°	2261	2745	3028
70°	2093	2760	3110
75°	1874	2811	3285
80°	1515	2978	3214
85°	1139	2615	2547



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.4	3.3
10°-20°	649.7	9.5
20°-30°	976.7	14.3
30°-40°	1163.4	17.0
40°-50°	1190.7	17.4
50°-60°	1072.0	15.7
60°-70°	841.8	12.3
70°-80°	546.4	8.0
80°-90°	169.0	2.5
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°	1853.8	27.1
0°-40°	3017.2	44.1
0°-60°	5279.8	77.2
0°-90°	6837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2402	2402	2402	2402	2402	
5°	2391	2395	2384	2398	2400	227
15°	2287	2293	2298	2317	2322	645
25°	2078	2096	2117	2152	2159	957
35°	1796	1818	1861	1907	1920	1120
45°	1448	1483	1548	1607	1620	1117
55°	1079	1127	1210	1273	1286	968
65°	710	764	862	934	951	707
75°	360	430	541	615	632	381
85°	74	137	169	165	165	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2401.9	2401.9	2401.9	2401.9	2401.9
2.5°	2404.1	2404.1	2393.2	2404.1	2406.2
5°	2391.0	2395.4	2384.5	2397.5	2399.7
7.5°	2378.0	2378.0	2371.5	2384.5	2386.7
10°	2354.1	2356.3	2354.1	2369.3	2371.5
12.5°	2323.7	2328.0	2330.2	2345.4	2347.6
15°	2286.8	2293.3	2297.6	2317.2	2321.5
17.5°	2245.5	2252.0	2262.9	2284.6	2289.0
20°	2195.6	2204.3	2217.3	2245.5	2252.0
22.5°	2141.3	2150.0	2171.7	2197.7	2208.6
25°	2078.3	2095.7	2117.4	2152.1	2158.7
27.5°	2015.3	2030.5	2058.8	2095.7	2104.4
30°	1941.5	1965.4	2000.1	2037.0	2045.7
32.5°	1869.8	1893.7	1935.0	1974.1	1984.9
35°	1796.0	1817.7	1861.1	1906.7	1919.8
37.5°	1711.3	1739.5	1787.3	1832.9	1845.9
40°	1622.2	1657.0	1711.3	1759.1	1774.3
42.5°	1537.6	1574.5	1628.8	1680.9	1698.3
45°	1448.5	1483.3	1548.4	1607.0	1620.1
47.5°	1357.3	1396.4	1465.9	1524.5	1546.2
50°	1266.1	1307.4	1381.2	1442.0	1455.0
52.5°	1174.9	1218.3	1296.5	1361.6	1368.2
55°	1079.3	1127.1	1209.6	1272.6	1285.6
57.5°	992.5	1033.7	1122.8	1187.9	1203.1
60°	896.9	942.5	1038.1	1098.9	1118.4
62.5°	805.7	853.5	953.4	1014.2	1031.6
65°	710.1	764.4	862.2	933.8	951.2
67.5°	627.6	679.7	784.0	853.5	870.8
70°	532.1	590.7	701.5	773.1	790.5
72.5°	449.5	510.3	621.1	690.6	716.7
75°	360.5	430.0	540.7	614.6	632.0
77.5°	273.6	354.0	466.9	523.4	523.4
80°	195.5	280.1	384.4	410.4	414.8
82.5°	128.1	210.7	284.5	282.3	282.3
85°	73.8	136.8	169.4	165.0	165.0
87.5°	28.2	56.5	60.8	60.8	58.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)