

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: P311164

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CP250-W2A-U-6500K**

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: P311164
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 6685.0 lumens
Efficiency: N/A
Efficacy: 101.9 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

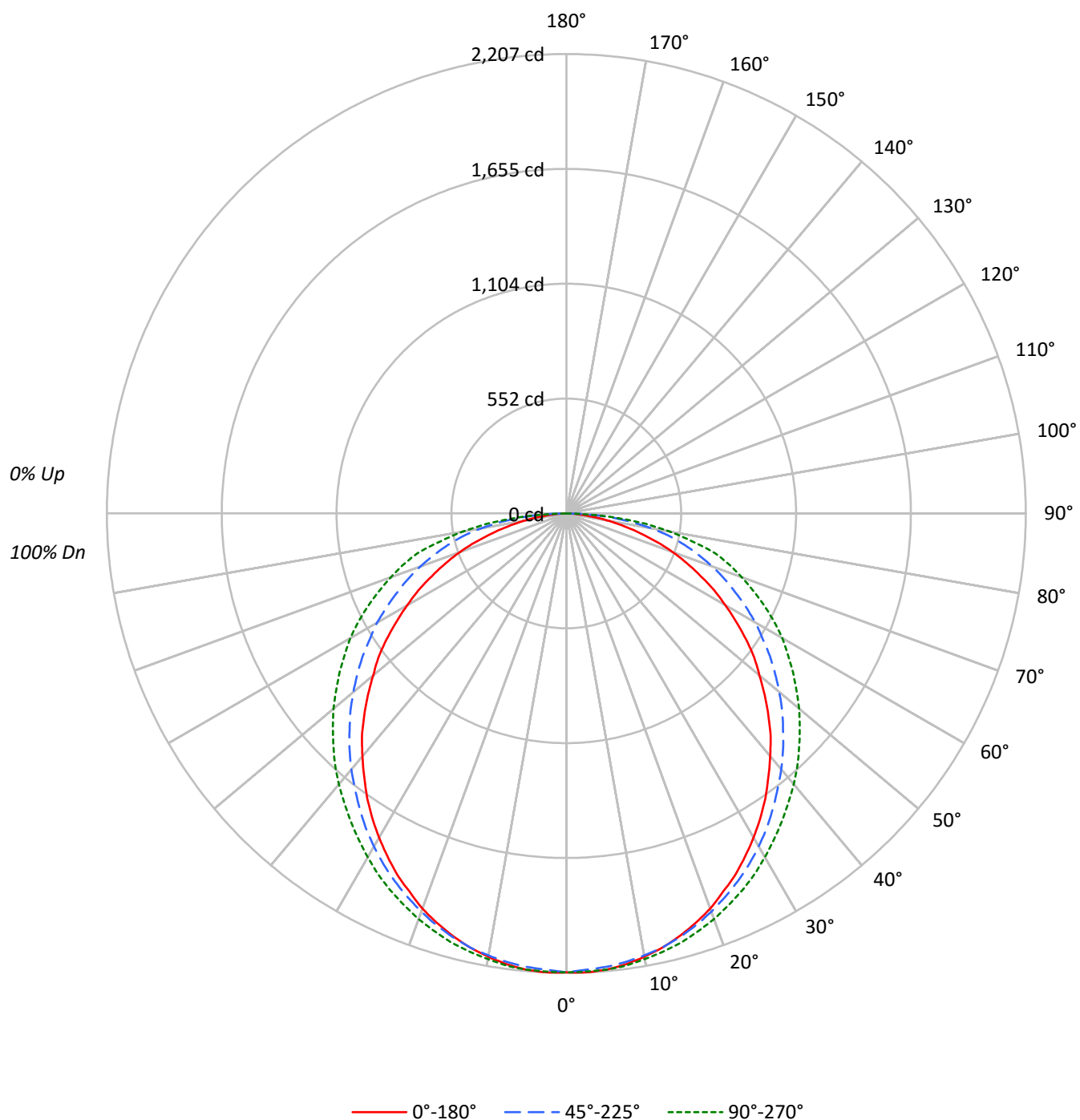
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2966	2966	2966
5°	2972	2954	2972
10°	2955	2945	2970
15°	2929	2935	2972
20°	2893	2915	2969
25°	2848	2894	2967
30°	2795	2871	2963
35°	2740	2842	2965
40°	2676	2820	2984
45°	2612	2802	3009
50°	2535	2795	3055
55°	2471	2799	3117
60°	2375	2823	3223
65°	2267	2853	3340
70°	2146	2941	3525
75°	1914	3067	3851
80°	1633	3248	3935
85°	1164	3219	3767



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.6	3.1
10°-20°	596.6	8.9
20°-30°	901.1	13.5
30°-40°	1086.0	16.2
40°-50°	1140.1	17.1
50°-60°	1066.7	16.0
60°-70°	880.9	13.2
70°-80°	600.2	9.0
80°-90°	204.7	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°	1706.3	25.5
0°-40°	2792.4	41.8
0°-60°	4999.2	74.8
0°-90°	6685.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6685.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2205	2205	2205	2205	2205	
5°	2200	2198	2187	2200	2200	209
15°	2103	2105	2107	2129	2134	593
25°	1918	1927	1950	1987	1998	883
35°	1668	1686	1730	1788	1805	1042
45°	1373	1402	1473	1553	1581	1059
55°	1054	1096	1193	1291	1329	940
65°	712	772	896	1009	1049	706
75°	368	452	590	701	741	393
85°	75	149	208	235	244	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2204.7	2204.7	2204.7	2204.7	2204.7
2.5°	2206.9	2204.7	2193.6	2204.7	2202.4
5°	2200.2	2198.0	2186.9	2200.2	2200.2
7.5°	2184.7	2184.7	2173.6	2189.1	2191.3
10°	2162.5	2162.5	2155.9	2173.6	2173.6
12.5°	2135.9	2135.9	2135.9	2153.6	2155.9
15°	2102.6	2104.8	2107.1	2129.2	2133.7
17.5°	2062.7	2067.1	2073.8	2100.4	2104.8
20°	2020.6	2025.0	2036.1	2067.1	2073.8
22.5°	1967.3	1978.4	1993.9	2029.4	2036.1
25°	1918.5	1927.4	1949.6	1987.3	1998.4
27.5°	1858.7	1872.0	1900.8	1940.7	1956.2
30°	1798.8	1812.1	1847.6	1894.1	1907.4
32.5°	1734.4	1754.4	1792.1	1840.9	1856.4
35°	1667.9	1685.7	1730.0	1787.7	1805.4
37.5°	1594.7	1619.1	1667.9	1730.0	1752.2
40°	1523.7	1550.4	1605.8	1672.3	1699.0
42.5°	1452.8	1479.4	1541.5	1616.9	1643.5
45°	1372.9	1401.8	1472.7	1552.6	1581.4
47.5°	1293.1	1328.6	1406.2	1490.5	1521.5
50°	1211.0	1250.9	1335.2	1423.9	1459.4
52.5°	1137.8	1175.5	1264.2	1359.6	1392.9
55°	1053.5	1095.7	1193.3	1290.9	1328.6
57.5°	967.0	1013.6	1117.9	1224.3	1262.0
60°	882.7	933.8	1049.1	1155.6	1197.7
62.5°	800.7	851.7	971.5	1082.4	1124.5
65°	712.0	771.9	896.1	1009.2	1049.1
67.5°	627.7	692.0	822.9	933.8	973.7
70°	545.6	607.7	747.5	856.1	896.1
72.5°	456.9	527.9	667.6	780.7	822.9
75°	368.2	452.5	590.0	700.9	740.8
77.5°	286.1	372.6	510.1	601.1	621.0
80°	210.7	299.4	419.2	483.5	507.9
82.5°	135.3	224.0	319.4	366.0	385.9
85°	75.4	148.6	208.5	235.1	244.0
87.5°	31.1	64.3	84.3	95.4	95.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)