

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: P311128

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-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: P311128
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-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 7204.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

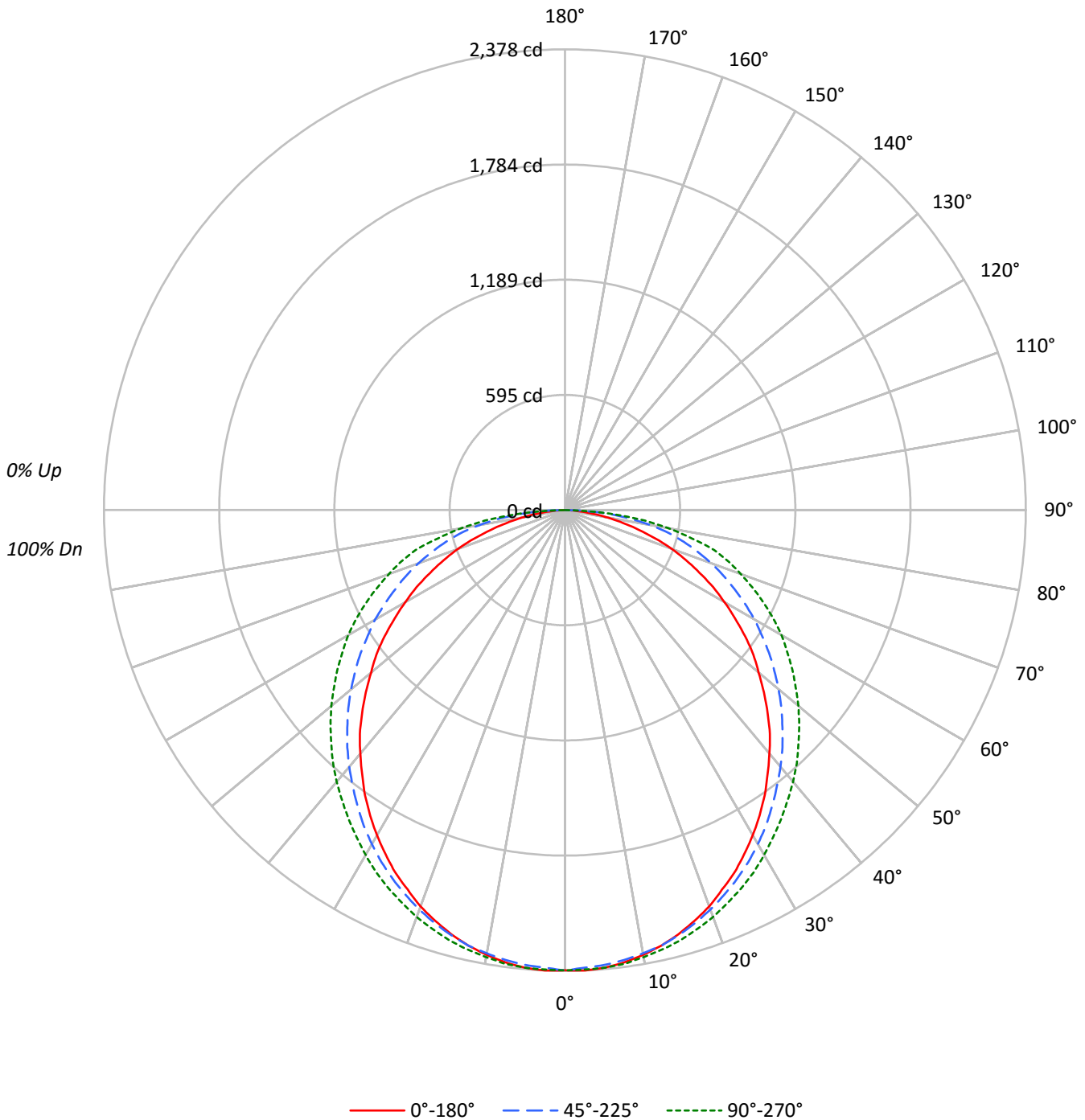
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3197	3197	3197
5°	3202	3183	3202
10°	3184	3174	3200
15°	3156	3163	3203
20°	3118	3142	3200
25°	3069	3119	3197
30°	3012	3093	3194
35°	2952	3062	3196
40°	2884	3039	3216
45°	2815	3020	3243
50°	2732	3012	3292
55°	2663	3016	3358
60°	2560	3042	3473
65°	2443	3074	3599
70°	2313	3169	3799
75°	2063	3305	4150
80°	1760	3500	4241
85°	1255	3469	4059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.8	3.1
10°-20°	642.9	8.9
20°-30°	971.1	13.5
30°-40°	1170.3	16.2
40°-50°	1228.7	17.1
50°-60°	1149.5	16.0
60°-70°	949.3	13.2
70°-80°	646.8	9.0
80°-90°	220.6	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°	1838.8	25.5
0°-40°	3009.2	41.8
0°-60°	5387.3	74.8
0°-90°	7204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7204.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2376	2376	2376	2376	2376	
5°	2371	2369	2357	2371	2371	225
15°	2266	2268	2271	2295	2299	639
25°	2068	2077	2101	2142	2154	951
35°	1797	1816	1864	1926	1946	1123
45°	1480	1511	1587	1673	1704	1141
55°	1135	1181	1286	1391	1432	1013
65°	767	832	966	1088	1130	761
75°	397	488	636	755	798	423
85°	81	160	225	253	263	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2375.8	2375.8	2375.8	2375.8	2375.8
2.5°	2378.2	2375.8	2363.9	2375.8	2373.4
5°	2371.0	2368.6	2356.7	2371.0	2371.0
7.5°	2354.3	2354.3	2342.4	2359.1	2361.5
10°	2330.4	2330.4	2323.2	2342.4	2342.4
12.5°	2301.7	2301.7	2301.7	2320.8	2323.2
15°	2265.9	2268.3	2270.6	2294.6	2299.3
17.5°	2222.8	2227.6	2234.8	2263.5	2268.3
20°	2177.4	2182.2	2194.2	2227.6	2234.8
22.5°	2120.1	2132.0	2148.8	2187.0	2194.2
25°	2067.5	2077.0	2100.9	2141.6	2153.5
27.5°	2003.0	2017.3	2048.4	2091.4	2108.1
30°	1938.4	1952.8	1991.0	2041.2	2055.5
32.5°	1869.1	1890.6	1931.2	1983.8	2000.6
35°	1797.4	1816.5	1864.3	1926.5	1945.6
37.5°	1718.5	1744.8	1797.4	1864.3	1888.2
40°	1642.0	1670.7	1730.5	1802.2	1830.9
42.5°	1565.6	1594.2	1661.2	1742.4	1771.1
45°	1479.5	1510.6	1587.1	1673.1	1704.2
47.5°	1393.5	1431.7	1515.4	1606.2	1639.6
50°	1305.0	1348.0	1438.9	1534.5	1572.7
52.5°	1226.2	1266.8	1362.4	1465.2	1501.0
55°	1135.3	1180.7	1285.9	1391.1	1431.7
57.5°	1042.1	1092.3	1204.6	1319.4	1360.0
60°	951.3	1006.3	1130.5	1245.3	1290.7
62.5°	862.8	917.8	1046.9	1166.4	1211.8
65°	767.2	831.8	965.6	1087.5	1130.5
67.5°	676.4	745.7	886.7	1006.3	1049.3
70°	588.0	654.9	805.5	922.6	965.6
72.5°	492.4	568.9	719.4	841.3	886.7
75°	396.8	487.6	635.8	755.3	798.3
77.5°	308.3	401.5	549.7	647.7	669.2
80°	227.1	322.7	451.7	521.1	547.3
82.5°	145.8	241.4	344.2	394.4	415.9
85°	81.3	160.1	224.7	253.4	262.9
87.5°	33.5	69.3	90.8	102.8	102.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)