

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: P311795

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-2700K**

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: P311795
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 2700K 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

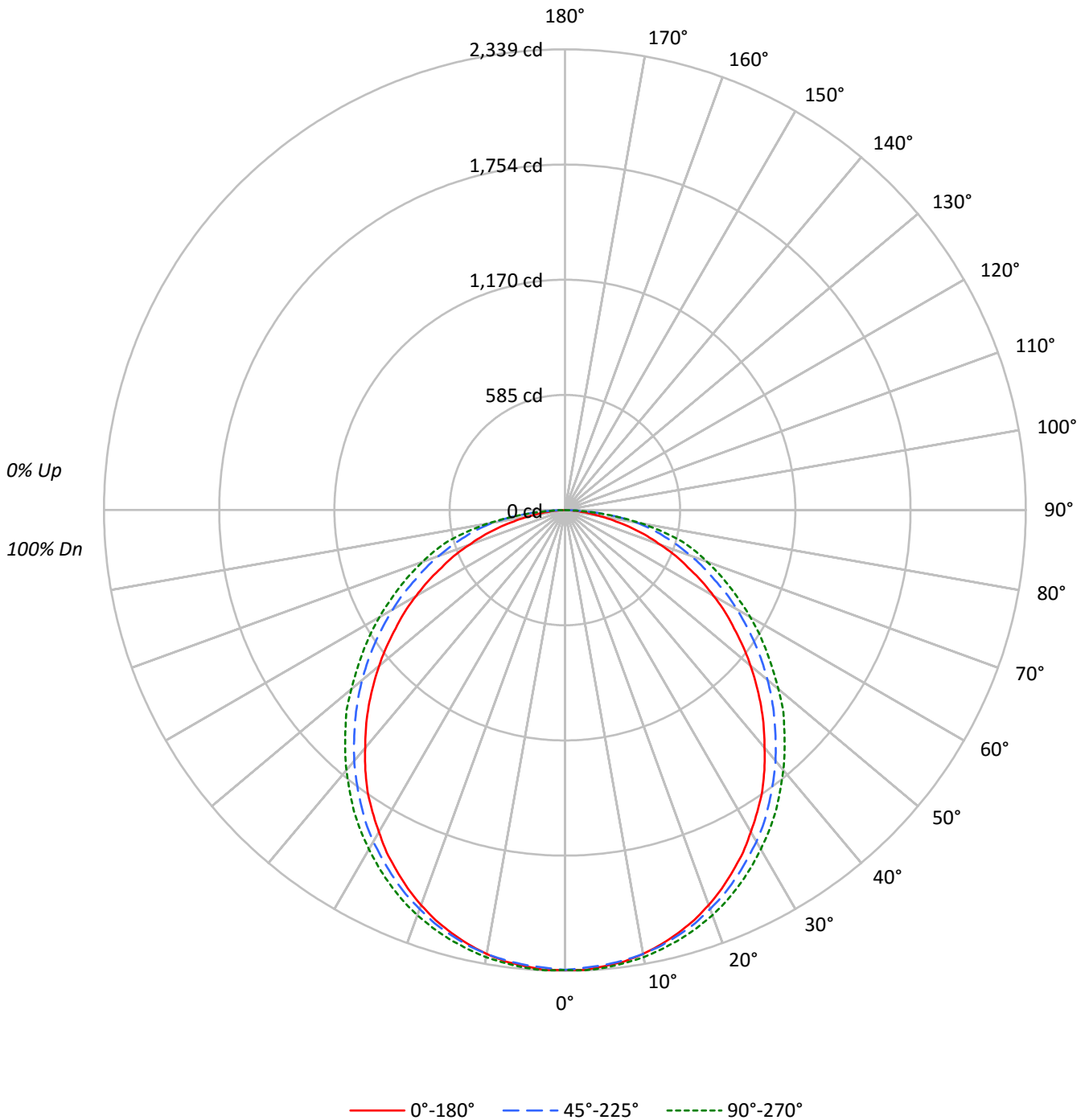
Lumens per Lamp: N/A
Luminaire Lumens: 6645.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 62.8
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				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°	3141	3141	3141
5°	3139	3130	3150
10°	3126	3126	3149
15°	3096	3111	3143
20°	3055	3086	3134
25°	2999	3055	3115
30°	2932	3020	3089
35°	2867	2971	3065
40°	2769	2921	3029
45°	2679	2864	2996
50°	2576	2810	2960
55°	2461	2758	2931
60°	2346	2715	2925
65°	2197	2668	2943
70°	2034	2682	3022
75°	1822	2732	3193
80°	1472	2895	3123
85°	1108	2541	2476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.0	3.3
10°-20°	631.5	9.5
20°-30°	949.3	14.3
30°-40°	1130.7	17.0
40°-50°	1157.2	17.4
50°-60°	1041.9	15.7
60°-70°	818.2	12.3
70°-80°	531.0	8.0
80°-90°	164.2	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°	1801.7	27.1
0°-40°	2932.5	44.1
0°-60°	5131.6	77.2
0°-90°	6645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2334	2334	2334	2334	2334	
5°	2324	2328	2318	2330	2332	221
15°	2223	2229	2233	2252	2256	627
25°	2020	2037	2058	2092	2098	931
35°	1746	1767	1809	1853	1866	1089
45°	1408	1442	1505	1562	1575	1085
55°	1049	1096	1176	1237	1250	940
65°	690	743	838	908	924	687
75°	350	418	526	597	614	371
85°	72	133	165	160	160	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2334.4	2334.4	2334.4	2334.4	2334.4
2.5°	2336.5	2336.5	2326.0	2336.5	2338.7
5°	2323.9	2328.1	2317.5	2330.2	2332.3
7.5°	2311.2	2311.2	2304.9	2317.5	2319.7
10°	2288.0	2290.1	2288.0	2302.8	2304.9
12.5°	2258.4	2262.7	2264.8	2279.6	2281.7
15°	2222.6	2228.9	2233.1	2252.1	2256.3
17.5°	2182.5	2188.8	2199.3	2220.5	2224.7
20°	2133.9	2142.4	2155.0	2182.5	2188.8
22.5°	2081.1	2089.6	2110.7	2136.0	2146.6
25°	2019.9	2036.8	2057.9	2091.7	2098.0
27.5°	1958.7	1973.5	2000.9	2036.8	2045.3
30°	1887.0	1910.2	1944.0	1979.8	1988.3
32.5°	1817.3	1840.5	1880.6	1918.6	1929.2
35°	1745.5	1766.7	1808.9	1853.2	1865.9
37.5°	1663.2	1690.7	1737.1	1781.4	1794.1
40°	1576.7	1610.5	1663.2	1709.7	1724.4
42.5°	1494.4	1530.3	1583.0	1633.7	1650.6
45°	1407.8	1441.6	1504.9	1561.9	1574.6
47.5°	1319.2	1357.2	1424.7	1481.7	1502.8
50°	1230.5	1270.6	1342.4	1401.5	1414.2
52.5°	1141.9	1184.1	1260.1	1323.4	1329.7
55°	1049.0	1095.5	1175.7	1236.9	1249.5
57.5°	964.6	1004.7	1091.2	1154.6	1169.3
60°	871.7	916.0	1008.9	1068.0	1087.0
62.5°	783.1	829.5	926.6	985.7	1002.6
65°	690.2	743.0	837.9	907.6	924.5
67.5°	610.0	660.6	762.0	829.5	846.4
70°	517.1	574.1	681.8	751.4	768.3
72.5°	436.9	496.0	603.7	671.2	696.5
75°	350.4	417.9	525.6	597.3	614.2
77.5°	265.9	344.0	453.8	508.7	508.7
80°	190.0	272.3	373.6	398.9	403.1
82.5°	124.5	204.7	276.5	274.4	274.4
85°	71.8	133.0	164.6	160.4	160.4
87.5°	27.4	54.9	59.1	59.1	57.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)