

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: P314418

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA08-W2A-U-4500K**

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: P314418
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: 24FCZ2-55HE-UNV-L83050-S-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4500K 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: 5652.0 lumens
Efficiency: N/A
Efficacy: 125.0 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

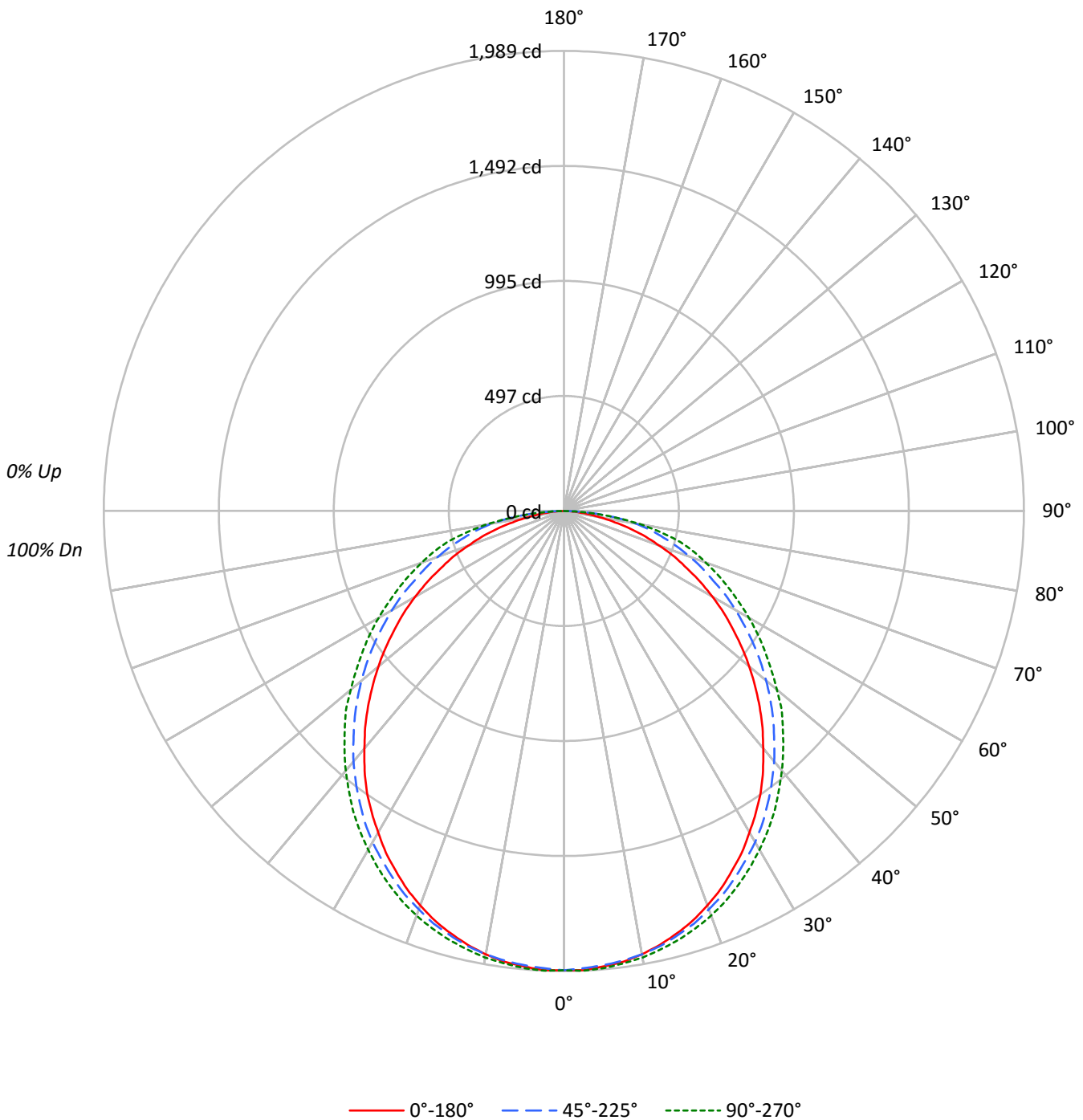
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2672	2672	2672
5°	2670	2662	2679
10°	2659	2659	2679
15°	2633	2646	2673
20°	2599	2625	2666
25°	2551	2599	2649
30°	2494	2569	2628
35°	2439	2527	2607
40°	2356	2485	2576
45°	2279	2436	2548
50°	2191	2390	2518
55°	2093	2346	2493
60°	1995	2309	2488
65°	1869	2269	2503
70°	1730	2281	2571
75°	1549	2324	2716
80°	1252	2462	2657
85°	942	2161	2106



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.0	3.3
10°-20°	537.1	9.5
20°-30°	807.4	14.3
30°-40°	961.8	17.0
40°-50°	984.3	17.4
50°-60°	886.2	15.7
60°-70°	695.9	12.3
70°-80°	451.7	8.0
80°-90°	139.7	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°	1532.5	27.1
0°-40°	2494.2	44.1
0°-60°	4364.7	77.2
0°-90°	5652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5652.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1986	1986	1986	1986	1986	
5°	1977	1980	1971	1982	1984	188
15°	1890	1896	1899	1916	1919	533
25°	1718	1732	1750	1779	1784	791
35°	1485	1503	1539	1576	1587	926
45°	1198	1226	1280	1328	1339	923
55°	892	932	1000	1052	1063	800
65°	587	632	713	772	786	584
75°	298	356	447	508	522	315
85°	61	113	140	136	136	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1985.6	1985.6	1985.6	1985.6	1985.6
2.5°	1987.4	1987.4	1978.4	1987.4	1989.2
5°	1976.6	1980.2	1971.2	1982.0	1983.8
7.5°	1965.8	1965.8	1960.5	1971.2	1973.0
10°	1946.1	1947.9	1946.1	1958.7	1960.5
12.5°	1921.0	1924.5	1926.3	1938.9	1940.7
15°	1890.4	1895.8	1899.4	1915.6	1919.2
17.5°	1856.3	1861.7	1870.7	1888.6	1892.2
20°	1815.0	1822.2	1833.0	1856.3	1861.7
22.5°	1770.2	1777.3	1795.3	1816.8	1825.8
25°	1718.1	1732.4	1750.4	1779.1	1784.5
27.5°	1666.0	1678.6	1701.9	1732.4	1739.6
30°	1605.0	1624.7	1653.5	1684.0	1691.2
32.5°	1545.7	1565.5	1599.6	1631.9	1640.9
35°	1484.7	1502.7	1538.6	1576.3	1587.0
37.5°	1414.7	1438.0	1477.5	1515.2	1526.0
40°	1341.1	1369.8	1414.7	1454.2	1466.7
42.5°	1271.1	1301.6	1346.5	1389.6	1403.9
45°	1197.5	1226.2	1280.0	1328.5	1339.3
47.5°	1122.1	1154.4	1211.8	1260.3	1278.2
50°	1046.7	1080.8	1141.8	1192.1	1202.8
52.5°	971.2	1007.2	1071.8	1125.6	1131.0
55°	892.3	931.8	1000.0	1052.0	1062.8
57.5°	820.4	854.6	928.2	982.0	994.6
60°	741.5	779.2	858.1	908.4	924.6
62.5°	666.1	705.5	788.1	838.4	852.8
65°	587.1	631.9	712.7	772.0	786.3
67.5°	518.8	561.9	648.1	705.5	719.9
70°	439.8	488.3	579.9	639.1	653.5
72.5°	371.6	421.9	513.5	570.9	592.4
75°	298.0	355.5	447.0	508.1	522.4
77.5°	226.2	292.6	386.0	432.7	432.7
80°	161.6	231.6	317.8	339.3	342.9
82.5°	105.9	174.1	235.2	233.4	233.4
85°	61.0	113.1	140.0	136.4	136.4
87.5°	23.3	46.7	50.3	50.3	48.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)