

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: P311655

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP250-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: P311655
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-L82765-S-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 5027.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

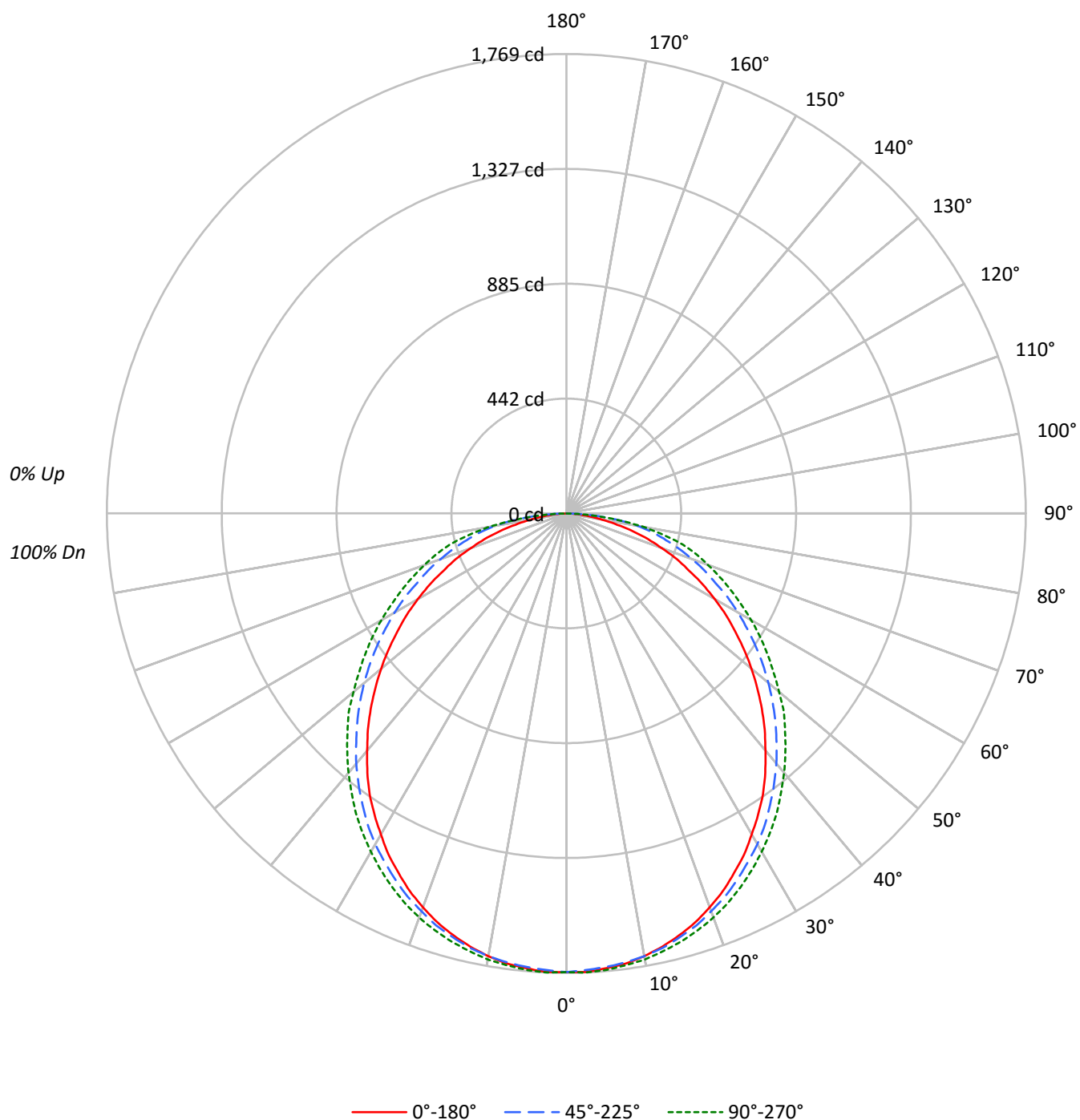
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	2376	2376	2376
5°	2374	2368	2383
10°	2365	2365	2382
15°	2342	2353	2378
20°	2311	2334	2371
25°	2269	2311	2356
30°	2218	2285	2337
35°	2169	2248	2318
40°	2095	2210	2291
45°	2026	2166	2267
50°	1949	2126	2239
55°	1862	2086	2217
60°	1775	2054	2213
65°	1662	2018	2227
70°	1539	2029	2286
75°	1378	2067	2416
80°	1113	2190	2363
85°	838	1922	1874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.2	3.3
10°-20°	477.7	9.5
20°-30°	718.1	14.3
30°-40°	855.4	17.0
40°-50°	875.5	17.4
50°-60°	788.2	15.7
60°-70°	619.0	12.3
70°-80°	401.7	8.0
80°-90°	124.2	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°	1363.0	27.1
0°-40°	2218.4	44.1
0°-60°	3882.1	77.2
0°-90°	5027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1766	1766	1766	1766	1766	
5°	1758	1761	1753	1763	1764	167
15°	1681	1686	1689	1704	1707	474
25°	1528	1541	1557	1582	1587	704
35°	1320	1336	1368	1402	1412	824
45°	1065	1091	1138	1182	1191	821
55°	794	829	889	936	945	711
65°	522	562	634	687	699	520
75°	265	316	398	452	465	280
85°	54	101	124	121	121	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1766.0	1766.0	1766.0	1766.0	1766.0
2.5°	1767.6	1767.6	1759.6	1767.6	1769.2
5°	1758.0	1761.2	1753.2	1762.8	1764.4
7.5°	1748.5	1748.5	1743.7	1753.2	1754.8
10°	1730.9	1732.5	1730.9	1742.1	1743.7
12.5°	1708.5	1711.7	1713.3	1724.5	1726.1
15°	1681.4	1686.2	1689.4	1703.7	1706.9
17.5°	1651.1	1655.8	1663.8	1679.8	1683.0
20°	1614.3	1620.7	1630.3	1651.1	1655.8
22.5°	1574.4	1580.8	1596.8	1615.9	1623.9
25°	1528.1	1540.9	1556.8	1582.4	1587.2
27.5°	1481.8	1493.0	1513.7	1540.9	1547.3
30°	1427.5	1445.1	1470.6	1497.8	1504.1
32.5°	1374.8	1392.4	1422.7	1451.5	1459.4
35°	1320.5	1336.5	1368.4	1402.0	1411.5
37.5°	1258.2	1279.0	1314.1	1347.7	1357.2
40°	1192.8	1218.3	1258.2	1293.4	1304.6
42.5°	1130.5	1157.7	1197.6	1235.9	1248.7
45°	1065.0	1090.6	1138.5	1181.6	1191.2
47.5°	998.0	1026.7	1077.8	1120.9	1136.9
50°	930.9	961.3	1015.5	1060.2	1069.8
52.5°	863.8	895.8	953.3	1001.2	1006.0
55°	793.6	828.7	889.4	935.7	945.3
57.5°	729.7	760.1	825.5	873.4	884.6
60°	659.5	693.0	763.3	808.0	822.3
62.5°	592.4	627.5	701.0	745.7	758.5
65°	522.1	562.1	633.9	686.6	699.4
67.5°	461.5	499.8	576.4	627.5	640.3
70°	391.2	434.3	515.8	568.4	581.2
72.5°	330.5	375.2	456.7	507.8	526.9
75°	265.1	316.2	397.6	451.9	464.7
77.5°	201.2	260.3	343.3	384.8	384.8
80°	143.7	206.0	282.6	301.8	305.0
82.5°	94.2	154.9	209.2	207.6	207.6
85°	54.3	100.6	124.5	121.4	121.4
87.5°	20.8	41.5	44.7	44.7	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)