

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: P309595

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P309595
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5000K 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: 3964.0 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

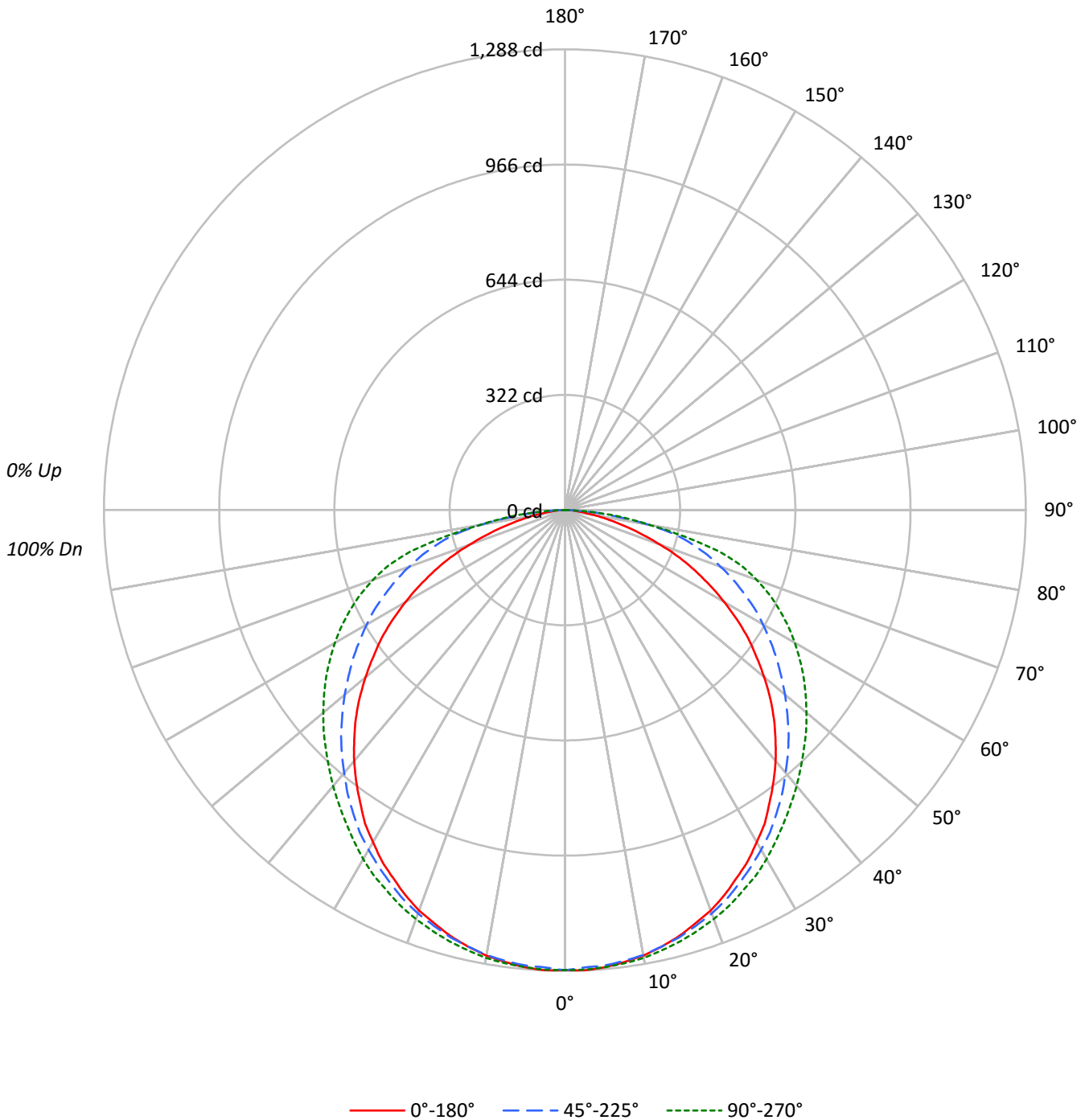
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1730	1730	1730
5°	1733	1726	1733
10°	1728	1725	1737
15°	1718	1722	1738
20°	1706	1718	1742
25°	1685	1710	1744
30°	1665	1704	1751
35°	1638	1695	1753
40°	1609	1685	1769
45°	1572	1683	1797
50°	1522	1681	1845
55°	1468	1693	1911
60°	1384	1719	1996
65°	1279	1759	2108
70°	1116	1821	2246
75°	906	1915	2321
80°	669	1877	1877
85°	513	1383	1562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.8	3.1
10°-20°	349.9	8.8
20°-30°	532.6	13.4
30°-40°	646.7	16.3
40°-50°	683.3	17.2
50°-60°	644.7	16.3
60°-70°	536.1	13.5
70°-80°	352.7	8.9
80°-90°	96.1	2.4
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°	1004.3	25.3
0°-40°	1651.1	41.7
0°-60°	2979.1	75.2
0°-90°	3964.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3964.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1286	1286	1286	1286	1286	
5°	1283	1283	1278	1283	1283	122
15°	1233	1235	1236	1248	1248	348
25°	1135	1142	1152	1172	1175	524
35°	997	1009	1032	1059	1067	624
45°	826	843	884	928	944	636
55°	626	652	722	790	815	557
65°	402	448	553	634	662	397
75°	174	254	368	436	446	188
85°	33	73	90	100	101	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1286.1	1286.1	1286.1	1286.1	1286.1
2.5°	1287.8	1286.1	1279.5	1286.1	1286.1
5°	1282.8	1282.8	1277.8	1282.8	1282.8
7.5°	1274.5	1274.5	1271.2	1277.8	1277.8
10°	1264.5	1264.5	1262.9	1271.2	1271.2
12.5°	1249.6	1251.3	1249.6	1259.6	1259.6
15°	1233.0	1234.7	1236.3	1248.0	1248.0
17.5°	1211.4	1214.8	1218.1	1231.4	1233.0
20°	1191.5	1193.2	1199.8	1214.8	1216.4
22.5°	1165.0	1170.0	1178.3	1193.2	1198.2
25°	1135.1	1141.7	1151.7	1171.6	1174.9
27.5°	1106.9	1111.9	1125.2	1146.7	1153.4
30°	1072.0	1080.3	1096.9	1118.5	1126.8
32.5°	1038.9	1047.2	1067.1	1090.3	1096.9
35°	997.4	1009.0	1032.2	1058.8	1067.1
37.5°	957.5	969.2	997.4	1027.2	1037.2
40°	916.1	929.3	959.2	994.0	1007.3
42.5°	871.2	889.5	922.7	960.9	975.8
45°	826.4	843.0	884.5	927.7	944.3
47.5°	778.3	798.2	843.0	894.5	914.4
50°	726.9	751.8	803.2	859.6	881.2
52.5°	675.4	703.6	761.7	824.8	848.0
55°	625.6	652.2	721.9	789.9	814.8
57.5°	570.9	604.1	680.4	753.4	778.3
60°	514.4	551.0	638.9	715.3	741.8
62.5°	458.0	499.5	599.1	675.4	703.6
65°	401.6	448.1	552.6	633.9	662.1
67.5°	346.8	398.3	509.5	590.8	619.0
70°	283.8	348.5	463.0	542.7	570.9
72.5°	225.7	300.4	418.2	492.9	517.8
75°	174.2	253.9	368.4	436.5	446.4
77.5°	127.8	207.4	317.0	340.2	341.9
80°	86.3	166.0	242.3	239.0	242.3
82.5°	56.4	124.5	152.7	170.9	172.6
85°	33.2	73.0	89.6	99.6	101.2
87.5°	16.6	24.9	31.5	33.2	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)