

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: P310978

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP250-W2A-U-3500K**

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: P310978
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: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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: 4600.0 lumens
Efficiency: N/A
Efficacy: 106.2 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

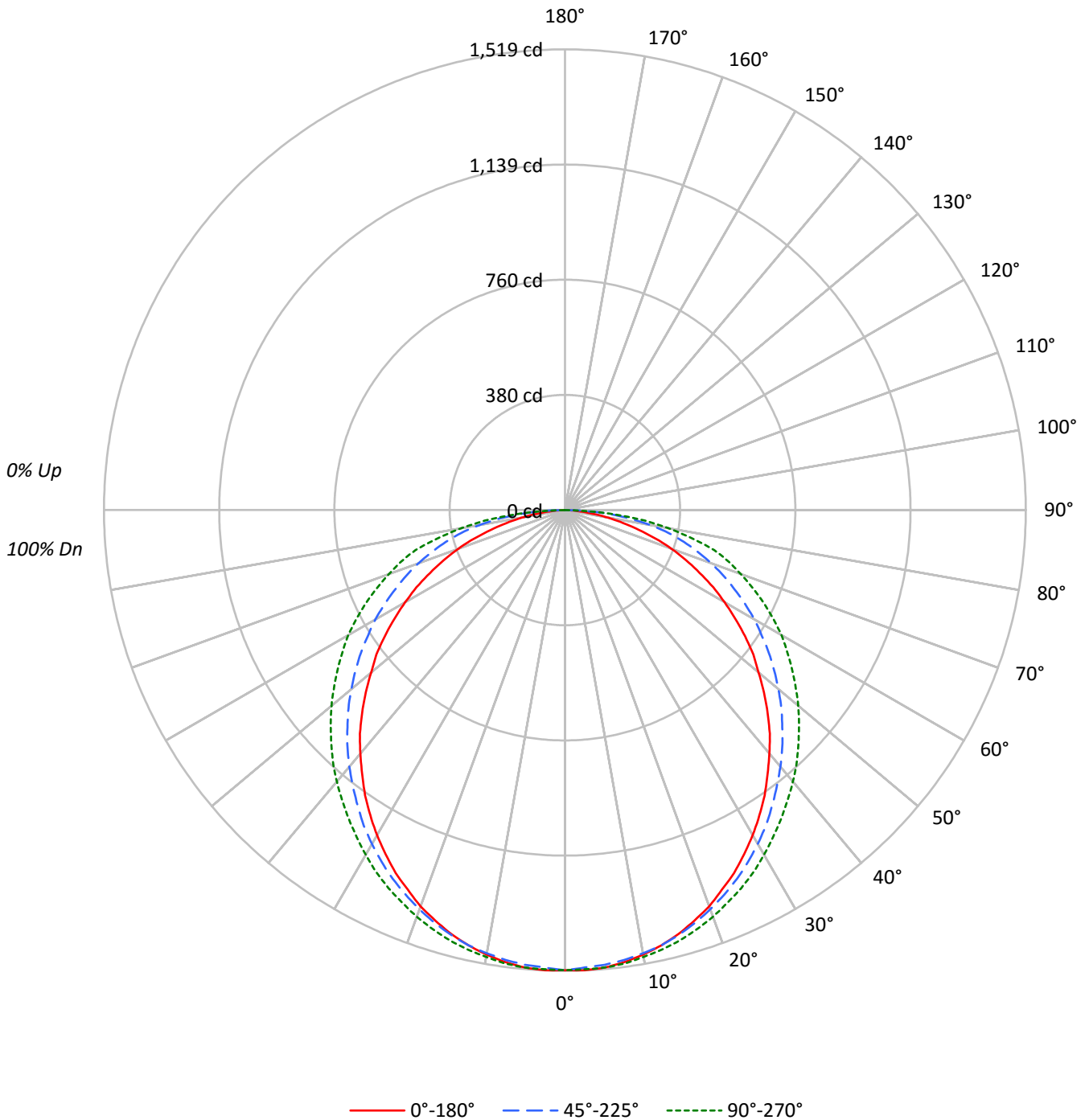
Input Watts (W): 43.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2041	2041	2041
5°	2045	2032	2045
10°	2033	2027	2043
15°	2015	2020	2045
20°	1991	2006	2043
25°	1960	1992	2041
30°	1923	1975	2039
35°	1885	1955	2041
40°	1842	1941	2053
45°	1798	1928	2071
50°	1744	1923	2102
55°	1700	1926	2145
60°	1635	1943	2218
65°	1560	1963	2298
70°	1477	2023	2426
75°	1317	2111	2650
80°	1124	2235	2708
85°	801	2215	2592



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.6	3.1
10°-20°	410.5	8.9
20°-30°	620.1	13.5
30°-40°	747.3	16.2
40°-50°	784.5	17.1
50°-60°	734.0	16.0
60°-70°	606.1	13.2
70°-80°	413.0	9.0
80°-90°	140.9	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°	1174.1	25.5
0°-40°	1921.4	41.8
0°-60°	3440.0	74.8
0°-90°	4600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4600.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1517	1517	1517	1517	1517	
5°	1514	1512	1505	1514	1514	144
15°	1447	1448	1450	1465	1468	408
25°	1320	1326	1342	1368	1375	607
35°	1148	1160	1190	1230	1242	717
45°	945	965	1013	1068	1088	729
55°	725	754	821	888	914	647
65°	490	531	617	694	722	486
75°	253	311	406	482	510	270
85°	52	102	144	162	168	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1517.0	1517.0	1517.0	1517.0	1517.0
2.5°	1518.6	1517.0	1509.4	1517.0	1515.5
5°	1514.0	1512.5	1504.8	1514.0	1514.0
7.5°	1503.3	1503.3	1495.7	1506.4	1507.9
10°	1488.0	1488.0	1483.5	1495.7	1495.7
12.5°	1469.7	1469.7	1469.7	1481.9	1483.5
15°	1446.8	1448.4	1449.9	1465.1	1468.2
17.5°	1419.4	1422.4	1427.0	1445.3	1448.4
20°	1390.4	1393.4	1401.0	1422.4	1427.0
22.5°	1353.7	1361.4	1372.1	1396.5	1401.0
25°	1320.2	1326.3	1341.5	1367.5	1375.1
27.5°	1279.0	1288.1	1308.0	1335.4	1346.1
30°	1237.7	1246.9	1271.3	1303.4	1312.5
32.5°	1193.5	1207.2	1233.2	1266.7	1277.4
35°	1147.7	1159.9	1190.4	1230.1	1242.3
37.5°	1097.3	1114.1	1147.7	1190.4	1205.7
40°	1048.5	1066.8	1105.0	1150.8	1169.1
42.5°	999.7	1018.0	1060.7	1112.6	1130.9
45°	944.7	964.6	1013.4	1068.3	1088.2
47.5°	889.8	914.2	967.6	1025.6	1047.0
50°	833.3	860.8	918.8	979.8	1004.2
52.5°	782.9	808.9	869.9	935.6	958.5
55°	724.9	753.9	821.1	888.2	914.2
57.5°	665.4	697.5	769.2	842.5	868.4
60°	607.4	642.5	721.9	795.1	824.1
62.5°	551.0	586.1	668.5	744.8	773.8
65°	489.9	531.1	616.6	694.4	721.9
67.5°	431.9	476.2	566.2	642.5	670.0
70°	375.4	418.2	514.3	589.1	616.6
72.5°	314.4	363.2	459.4	537.2	566.2
75°	253.3	311.3	406.0	482.3	509.7
77.5°	196.9	256.4	351.0	413.6	427.3
80°	145.0	206.0	288.5	332.7	349.5
82.5°	93.1	154.1	219.8	251.8	265.6
85°	51.9	102.3	143.5	161.8	167.9
87.5°	21.4	44.3	58.0	65.6	65.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)