

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: P314063

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-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: P314063
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-L83050-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 4992.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

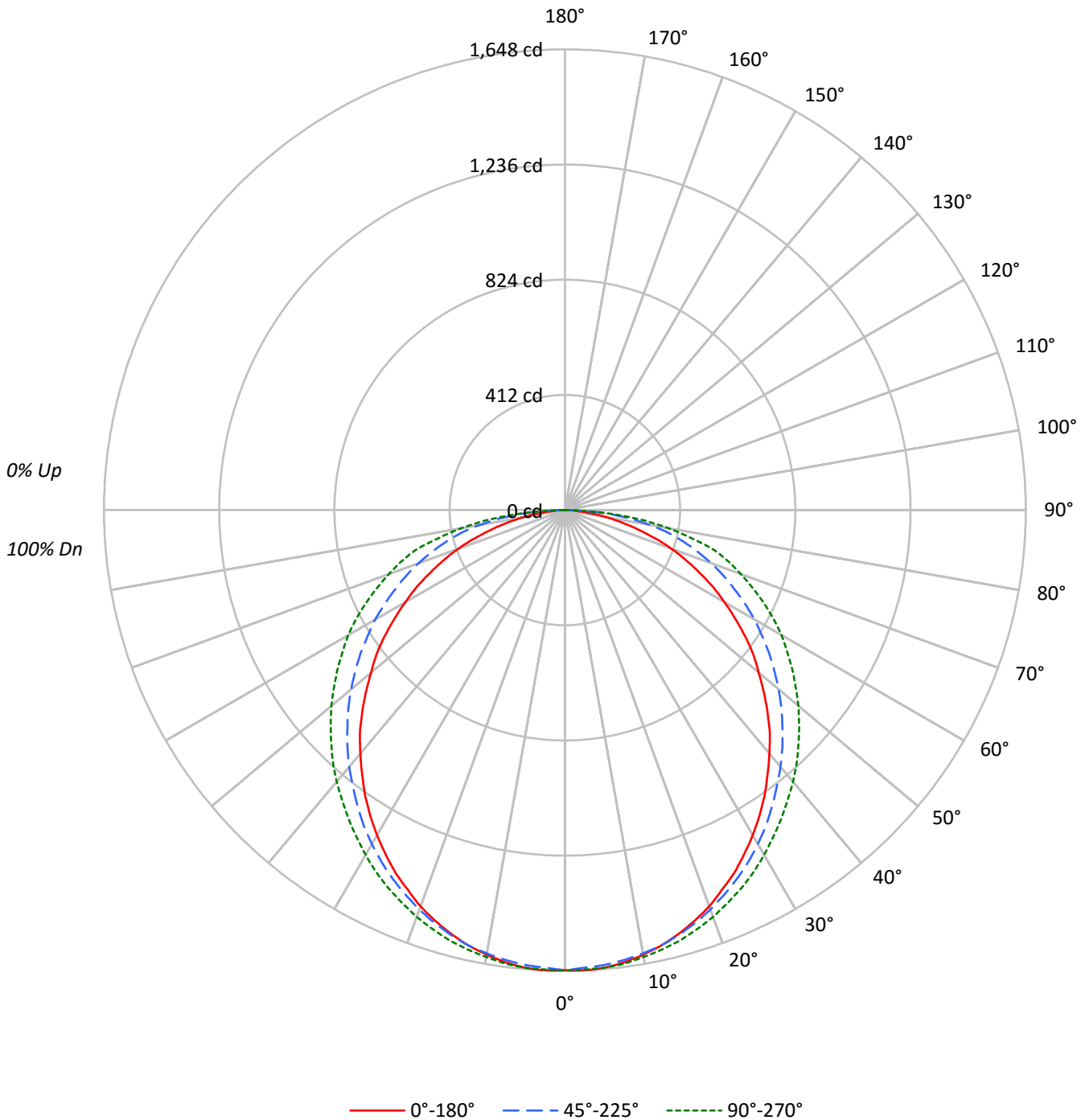
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2215	2215	2215
5°	2219	2206	2219
10°	2206	2200	2218
15°	2187	2192	2219
20°	2160	2177	2217
25°	2127	2161	2215
30°	2087	2144	2213
35°	2046	2122	2214
40°	1998	2106	2228
45°	1951	2093	2247
50°	1893	2087	2281
55°	1845	2090	2327
60°	1774	2108	2407
65°	1693	2130	2494
70°	1603	2196	2632
75°	1429	2290	2876
80°	1219	2425	2939
85°	869	2404	2813



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.8	3.1
10°-20°	445.5	8.9
20°-30°	672.9	13.5
30°-40°	811.0	16.2
40°-50°	851.4	17.1
50°-60°	796.5	16.0
60°-70°	657.8	13.2
70°-80°	448.2	9.0
80°-90°	152.9	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°	1274.2	25.5
0°-40°	2085.2	41.8
0°-60°	3733.1	74.8
0°-90°	4992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1646	1646	1646	1646	1646	
5°	1643	1641	1633	1643	1643	156
15°	1570	1572	1573	1590	1593	443
25°	1433	1439	1456	1484	1492	659
35°	1246	1259	1292	1335	1348	778
45°	1025	1047	1100	1159	1181	791
55°	787	818	891	964	992	702
65°	532	576	669	754	783	527
75°	275	338	441	523	553	293
85°	56	111	156	176	182	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1646.3	1646.3	1646.3	1646.3	1646.3
2.5°	1648.0	1646.3	1638.0	1646.3	1644.7
5°	1643.0	1641.3	1633.1	1643.0	1643.0
7.5°	1631.4	1631.4	1623.1	1634.7	1636.4
10°	1614.8	1614.8	1609.9	1623.1	1623.1
12.5°	1595.0	1595.0	1595.0	1608.2	1609.9
15°	1570.1	1571.8	1573.4	1590.0	1593.3
17.5°	1540.3	1543.6	1548.6	1568.5	1571.8
20°	1508.8	1512.2	1520.4	1543.6	1548.6
22.5°	1469.1	1477.4	1489.0	1515.5	1520.4
25°	1432.7	1439.3	1455.8	1484.0	1492.3
27.5°	1387.9	1397.9	1419.4	1449.2	1460.8
30°	1343.2	1353.2	1379.7	1414.4	1424.4
32.5°	1295.2	1310.1	1338.3	1374.7	1386.3
35°	1245.5	1258.8	1291.9	1334.9	1348.2
37.5°	1190.8	1209.1	1245.5	1291.9	1308.4
40°	1137.8	1157.7	1199.1	1248.8	1268.7
42.5°	1084.8	1104.7	1151.1	1207.4	1227.3
45°	1025.2	1046.8	1099.8	1159.4	1180.9
47.5°	965.6	992.1	1050.1	1113.0	1136.2
50°	904.3	934.1	997.1	1063.3	1089.8
52.5°	849.7	877.8	944.1	1015.3	1040.1
55°	786.7	818.2	891.1	963.9	992.1
57.5°	722.1	756.9	834.8	914.3	942.4
60°	659.2	697.3	783.4	862.9	894.4
62.5°	597.9	636.0	725.4	808.3	839.7
65°	531.7	576.4	669.1	753.6	783.4
67.5°	468.7	516.8	614.5	697.3	727.1
70°	407.4	453.8	558.2	639.3	669.1
72.5°	341.2	394.2	498.5	583.0	614.5
75°	274.9	337.9	440.6	523.4	553.2
77.5°	213.7	278.3	380.9	448.8	463.8
80°	157.3	223.6	313.0	361.1	379.3
82.5°	101.0	167.3	238.5	273.3	288.2
85°	56.3	111.0	155.7	175.6	182.2
87.5°	23.2	48.0	62.9	71.2	71.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)