

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: P310984

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP250-W2A-U-6500K**

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: P310984
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-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 4922.0 lumens
Efficiency: N/A
Efficacy: 109.4 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

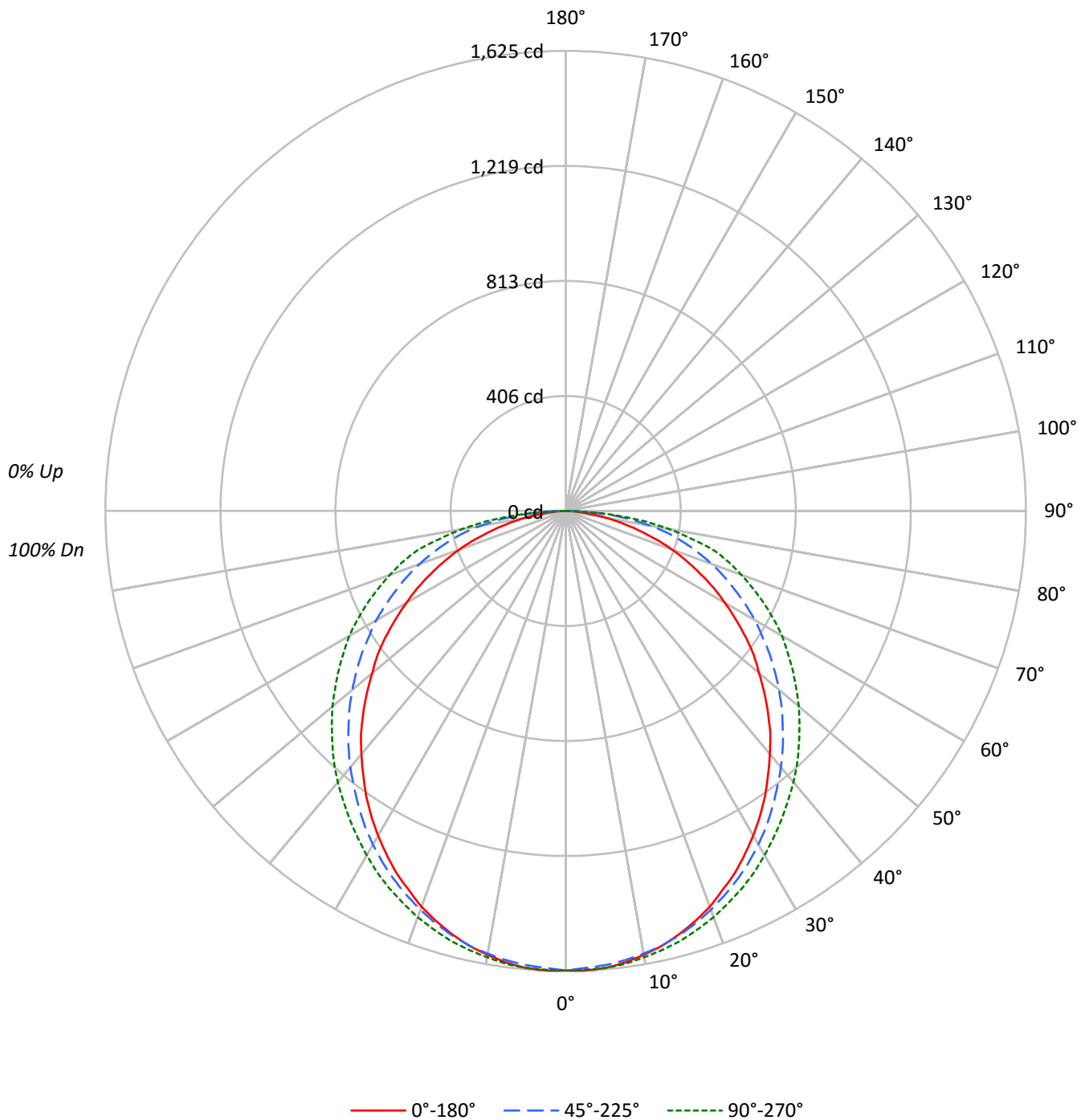
Input Watts (W): 45
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2184	2184	2184
5°	2188	2175	2188
10°	2175	2169	2187
15°	2156	2161	2188
20°	2130	2146	2186
25°	2097	2131	2184
30°	2058	2113	2182
35°	2017	2092	2183
40°	1971	2077	2197
45°	1923	2063	2216
50°	1866	2058	2249
55°	1820	2061	2295
60°	1749	2079	2373
65°	1669	2100	2459
70°	1580	2165	2595
75°	1409	2258	2835
80°	1202	2391	2898
85°	857	2370	2773



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.6	3.1
10°-20°	439.3	8.9
20°-30°	663.5	13.5
30°-40°	799.6	16.2
40°-50°	839.5	17.1
50°-60°	785.3	16.0
60°-70°	648.6	13.2
70°-80°	441.9	9.0
80°-90°	150.7	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°	1256.3	25.5
0°-40°	2055.9	41.8
0°-60°	3680.7	74.8
0°-90°	4922.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4922.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1623	1623	1623	1623	1623	
5°	1620	1618	1610	1620	1620	154
15°	1548	1550	1551	1568	1571	436
25°	1413	1419	1435	1463	1471	650
35°	1228	1241	1274	1316	1329	767
45°	1011	1032	1084	1143	1164	780
55°	776	807	879	950	978	692
65°	524	568	660	743	772	520
75°	271	333	434	516	545	289
85°	56	109	154	173	180	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1623.2	1623.2	1623.2	1623.2	1623.2
2.5°	1624.9	1623.2	1615.1	1623.2	1621.6
5°	1620.0	1618.3	1610.2	1620.0	1620.0
7.5°	1608.5	1608.5	1600.4	1611.8	1613.4
10°	1592.2	1592.2	1587.3	1600.4	1600.4
12.5°	1572.6	1572.6	1572.6	1585.7	1587.3
15°	1548.1	1549.7	1551.4	1567.7	1571.0
17.5°	1518.7	1522.0	1526.9	1546.5	1549.7
20°	1487.7	1491.0	1499.1	1522.0	1526.9
22.5°	1448.5	1456.7	1468.1	1494.2	1499.1
25°	1412.6	1419.1	1435.4	1463.2	1471.4
27.5°	1368.5	1378.3	1399.5	1428.9	1440.3
30°	1324.4	1334.2	1360.3	1394.6	1404.4
32.5°	1277.0	1291.7	1319.5	1355.4	1366.8
35°	1228.0	1241.1	1273.8	1316.2	1329.3
37.5°	1174.1	1192.1	1228.0	1273.8	1290.1
40°	1121.9	1141.5	1182.3	1231.3	1250.9
42.5°	1069.6	1089.2	1135.0	1190.5	1210.1
45°	1010.8	1032.1	1084.3	1143.1	1164.4
47.5°	952.1	978.2	1035.3	1097.4	1120.3
50°	891.6	921.0	983.1	1048.4	1074.5
52.5°	837.7	865.5	930.8	1001.0	1025.5
55°	775.7	806.7	878.6	950.4	978.2
57.5°	712.0	746.3	823.0	901.4	929.2
60°	649.9	687.5	772.4	850.8	881.8
62.5°	589.5	627.1	715.3	796.9	827.9
65°	524.2	568.3	659.7	743.0	772.4
67.5°	462.1	509.5	605.9	687.5	716.9
70°	401.7	447.5	550.3	630.3	659.7
72.5°	336.4	388.7	491.5	574.8	605.9
75°	271.1	333.1	434.4	516.0	545.4
77.5°	210.7	274.3	375.6	442.6	457.2
80°	155.1	220.5	308.6	356.0	374.0
82.5°	99.6	164.9	235.2	269.5	284.1
85°	55.5	109.4	153.5	173.1	179.6
87.5°	22.9	47.4	62.1	70.2	70.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)