

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: P311460

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-S-CP125-W2A-U-5700K**

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: P311460
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: 24FCZ2-45HE-UNV-L82765-S-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5700K 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: 4389.0 lumens
Efficiency: N/A
Efficacy: 126.5 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

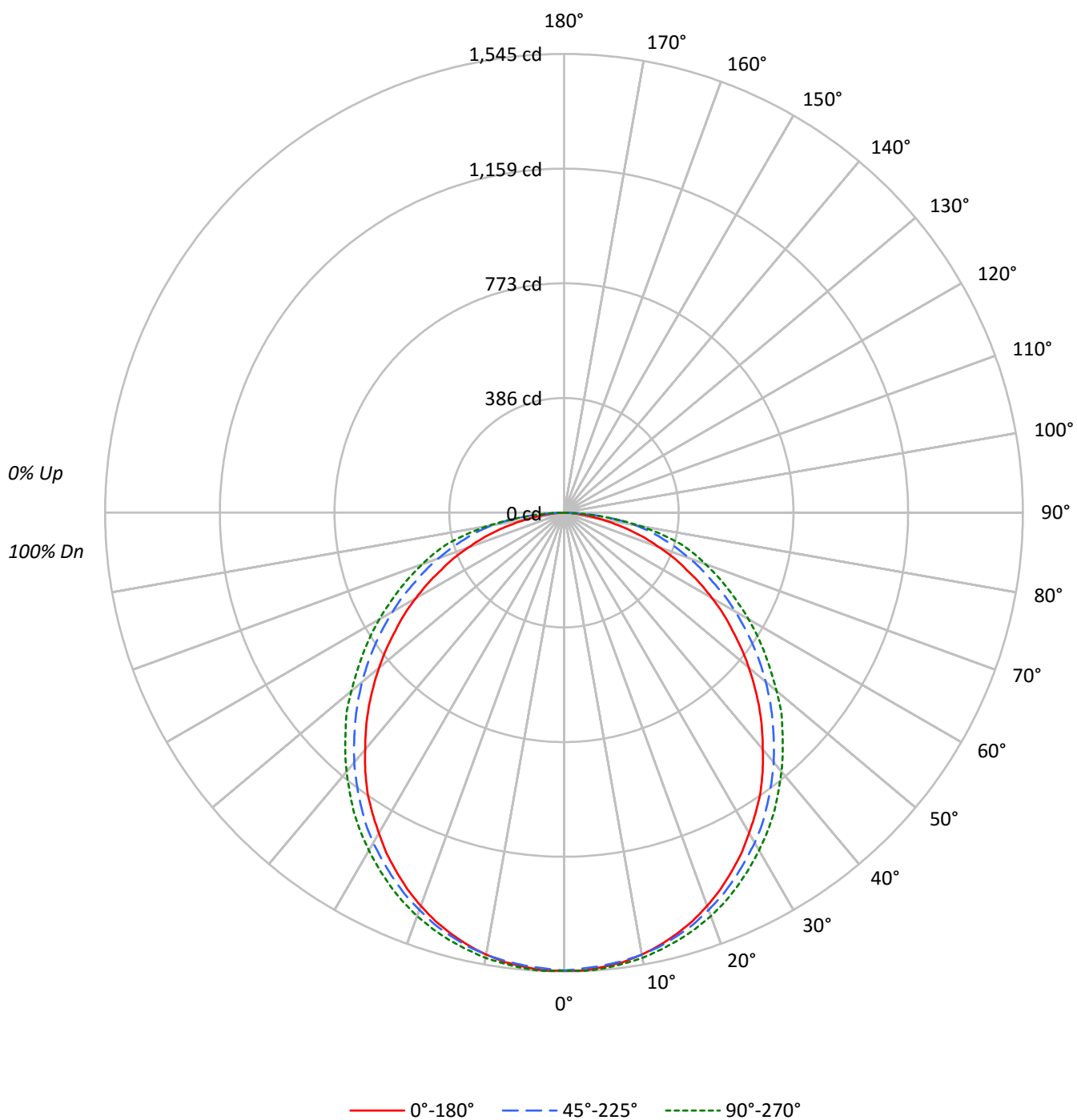
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2075	2075	2075
5°	2073	2067	2081
10°	2065	2065	2080
15°	2045	2055	2076
20°	2018	2038	2070
25°	1981	2018	2057
30°	1936	1995	2040
35°	1894	1963	2024
40°	1829	1930	2001
45°	1769	1891	1979
50°	1701	1856	1955
55°	1625	1822	1936
60°	1549	1793	1932
65°	1451	1762	1944
70°	1344	1771	1996
75°	1203	1804	2109
80°	972	1912	2063
85°	732	1678	1636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.0	3.3
10°-20°	417.1	9.5
20°-30°	627.0	14.3
30°-40°	746.8	17.0
40°-50°	764.4	17.4
50°-60°	688.1	15.7
60°-70°	540.4	12.3
70°-80°	350.7	8.0
80°-90°	108.5	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°	1190.0	27.1
0°-40°	1936.9	44.1
0°-60°	3389.4	77.2
0°-90°	4389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1542	1542	1542	1542	1542	
5°	1535	1538	1531	1539	1540	146
15°	1468	1472	1475	1488	1490	414
25°	1334	1345	1359	1382	1386	615
35°	1153	1167	1195	1224	1232	719
45°	930	952	994	1032	1040	717
55°	693	724	776	817	825	621
65°	456	491	554	600	611	454
75°	231	276	347	394	406	245
85°	47	88	109	106	106	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1541.9	1541.9	1541.9	1541.9	1541.9
2.5°	1543.3	1543.3	1536.3	1543.3	1544.7
5°	1534.9	1537.7	1530.7	1539.1	1540.5
7.5°	1526.5	1526.5	1522.4	1530.7	1532.1
10°	1511.2	1512.6	1511.2	1521.0	1522.4
12.5°	1491.7	1494.5	1495.9	1505.6	1507.0
15°	1468.0	1472.2	1475.0	1487.5	1490.3
17.5°	1441.5	1445.7	1452.7	1466.6	1469.4
20°	1409.4	1415.0	1423.4	1441.5	1445.7
22.5°	1374.6	1380.2	1394.1	1410.8	1417.8
25°	1334.2	1345.3	1359.3	1381.6	1385.7
27.5°	1293.7	1303.5	1321.6	1345.3	1350.9
30°	1246.3	1261.7	1284.0	1307.7	1313.3
32.5°	1200.3	1215.7	1242.2	1267.2	1274.2
35°	1152.9	1166.9	1194.8	1224.0	1232.4
37.5°	1098.6	1116.7	1147.4	1176.6	1185.0
40°	1041.4	1063.7	1098.6	1129.2	1139.0
42.5°	987.0	1010.7	1045.6	1079.0	1090.2
45°	929.9	952.2	994.0	1031.6	1040.0
47.5°	871.3	896.4	941.0	978.7	992.6
50°	812.8	839.3	886.7	925.7	934.1
52.5°	754.2	782.1	832.3	874.1	878.3
55°	692.9	723.5	776.5	816.9	825.3
57.5°	637.1	663.6	720.8	762.6	772.3
60°	575.8	605.0	666.4	705.4	718.0
62.5°	517.2	547.9	612.0	651.0	662.2
65°	455.9	490.7	553.5	599.5	610.6
67.5°	402.9	436.4	503.3	547.9	559.0
70°	341.6	379.2	450.3	496.3	507.5
72.5°	288.6	327.6	398.7	443.3	460.1
75°	231.4	276.0	347.1	394.5	405.7
77.5°	175.7	227.2	299.7	336.0	336.0
80°	125.5	179.8	246.8	263.5	266.3
82.5°	82.3	135.2	182.6	181.2	181.2
85°	47.4	87.8	108.7	106.0	106.0
87.5°	18.1	36.2	39.0	39.0	37.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)