

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: P311451

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-S-CA125-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: P311451
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-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4476.0 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

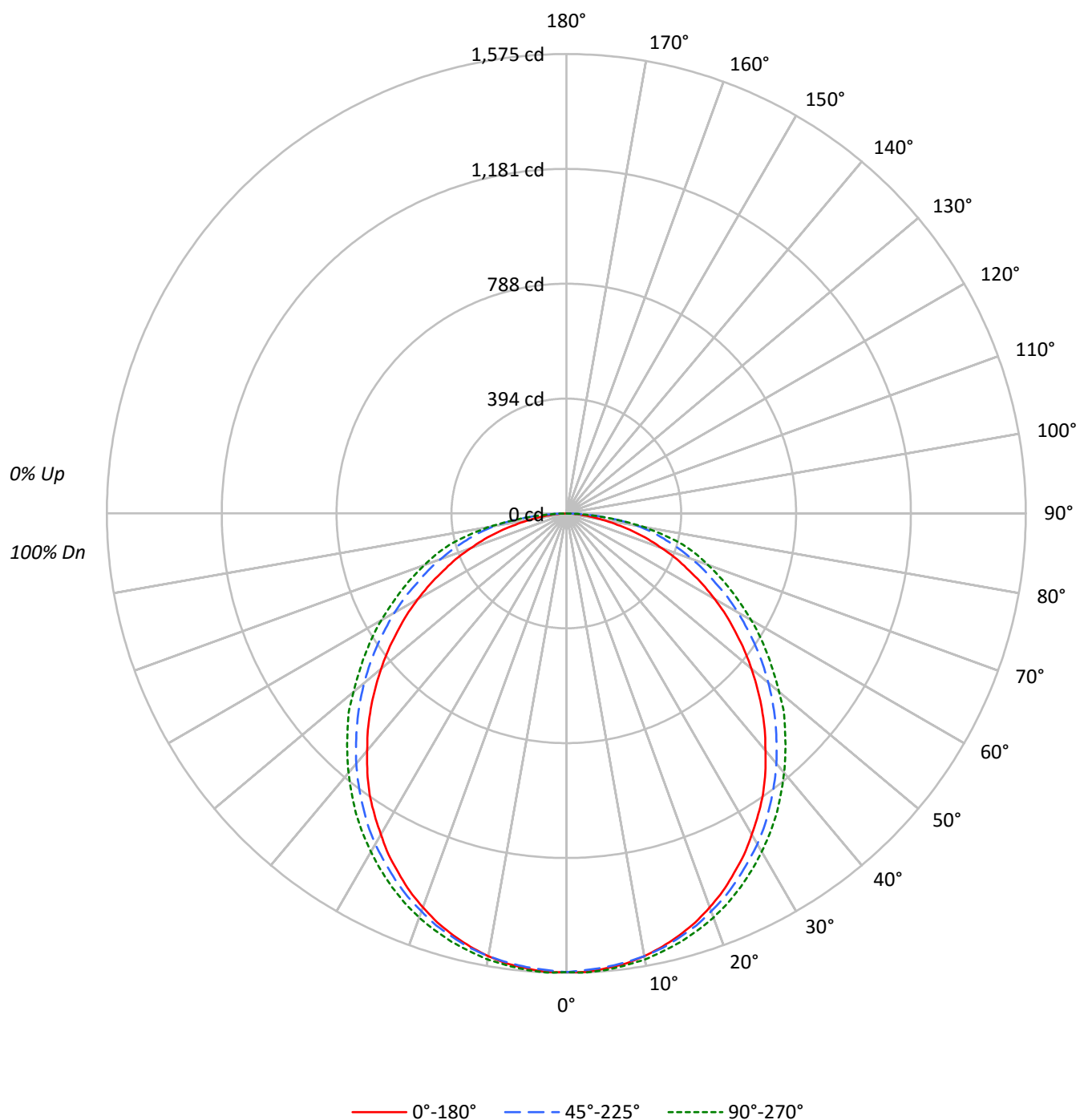
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2116	2116	2116
5°	2114	2108	2122
10°	2106	2106	2121
15°	2085	2095	2117
20°	2058	2078	2111
25°	2020	2058	2098
30°	1975	2034	2081
35°	1931	2001	2064
40°	1865	1968	2040
45°	1804	1929	2018
50°	1735	1893	1994
55°	1658	1858	1974
60°	1580	1829	1970
65°	1480	1797	1982
70°	1370	1806	2036
75°	1227	1840	2151
80°	992	1949	2104
85°	746	1712	1669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.9	3.3
10°-20°	425.4	9.5
20°-30°	639.4	14.3
30°-40°	761.6	17.0
40°-50°	779.5	17.4
50°-60°	701.8	15.7
60°-70°	551.1	12.3
70°-80°	357.7	8.0
80°-90°	110.6	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°	1213.6	27.1
0°-40°	1975.3	44.1
0°-60°	3456.6	77.2
0°-90°	4476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1565	1568	1561	1570	1571	149
15°	1497	1501	1504	1517	1520	422
25°	1361	1372	1386	1409	1413	627
35°	1176	1190	1218	1248	1257	733
45°	948	971	1014	1052	1061	731
55°	707	738	792	833	842	633
65°	465	500	564	611	623	463
75°	236	282	354	402	414	250
85°	48	90	111	108	108	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1572.4	1572.4	1572.4	1572.4	1572.4
2.5°	1573.9	1573.9	1566.8	1573.9	1575.3
5°	1565.3	1568.2	1561.1	1569.6	1571.0
7.5°	1556.8	1556.8	1552.5	1561.1	1562.5
10°	1541.2	1542.6	1541.2	1551.1	1552.5
12.5°	1521.3	1524.1	1525.5	1535.5	1536.9
15°	1497.1	1501.4	1504.2	1517.0	1519.8
17.5°	1470.1	1474.3	1481.5	1495.7	1498.5
20°	1437.4	1443.1	1451.6	1470.1	1474.3
22.5°	1401.8	1407.5	1421.7	1438.8	1445.9
25°	1360.6	1372.0	1386.2	1408.9	1413.2
27.5°	1319.4	1329.3	1347.8	1372.0	1377.7
30°	1271.0	1286.7	1309.4	1333.6	1339.3
32.5°	1224.1	1239.8	1266.8	1292.4	1299.5
35°	1175.8	1190.0	1218.4	1248.3	1256.8
37.5°	1120.3	1138.8	1170.1	1200.0	1208.5
40°	1062.0	1084.8	1120.3	1151.6	1161.6
42.5°	1006.6	1030.8	1066.3	1100.4	1111.8
45°	948.3	971.1	1013.7	1052.1	1060.6
47.5°	888.6	914.2	959.7	998.1	1012.3
50°	828.9	855.9	904.2	944.0	952.6
52.5°	769.2	797.6	848.8	891.4	895.7
55°	706.6	737.9	791.9	833.1	841.7
57.5°	649.7	676.7	735.0	777.7	787.6
60°	587.2	617.0	679.6	719.4	732.2
62.5°	527.5	558.7	624.1	664.0	675.3
65°	464.9	500.5	564.4	611.3	622.7
67.5°	410.9	445.0	513.2	558.7	570.1
70°	348.3	386.7	459.2	506.1	517.5
72.5°	294.3	334.1	406.6	452.1	469.2
75°	236.0	281.5	354.0	402.4	413.7
77.5°	179.1	231.7	305.7	342.6	342.6
80°	128.0	183.4	251.6	268.7	271.6
82.5°	83.9	137.9	186.2	184.8	184.8
85°	48.3	89.6	110.9	108.1	108.1
87.5°	18.5	37.0	39.8	39.8	38.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)