

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: P309702

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP125-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: P309702
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
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: 4500.0 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

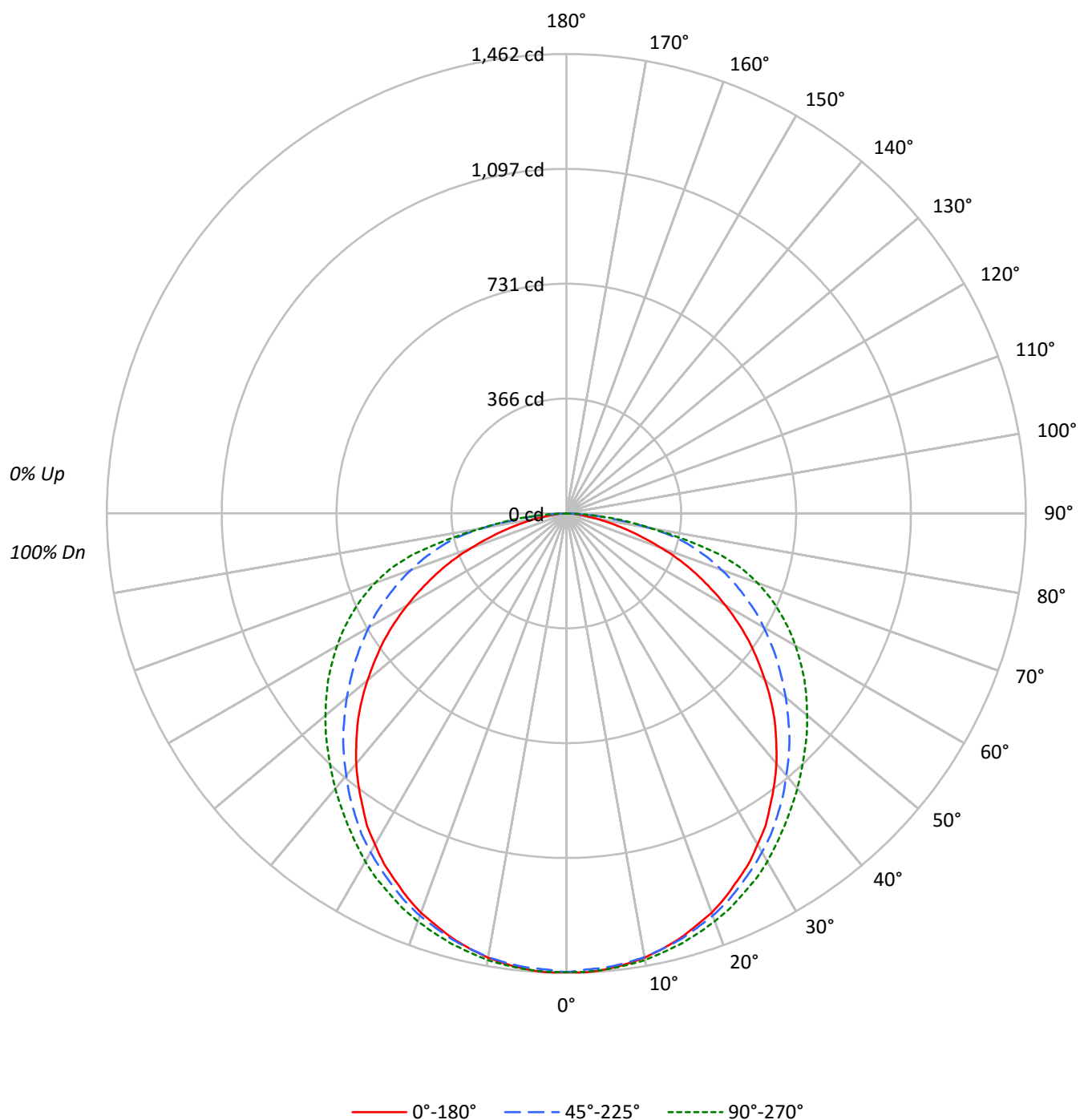
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1964	1964	1964
5°	1967	1959	1967
10°	1961	1959	1972
15°	1950	1955	1973
20°	1937	1950	1977
25°	1913	1941	1980
30°	1891	1935	1987
35°	1860	1925	1990
40°	1826	1913	2008
45°	1785	1911	2040
50°	1727	1909	2094
55°	1666	1922	2170
60°	1572	1952	2266
65°	1451	1997	2393
70°	1267	2068	2550
75°	1028	2174	2635
80°	759	2132	2132
85°	582	1570	1774



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	3.1
10°-20°	397.2	8.8
20°-30°	604.7	13.4
30°-40°	734.2	16.3
40°-50°	775.7	17.2
50°-60°	731.9	16.3
60°-70°	608.6	13.5
70°-80°	400.4	8.9
80°-90°	109.1	2.4
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°	1140.1	25.3
0°-40°	1874.3	41.7
0°-60°	3381.9	75.2
0°-90°	4500.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4500.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1460	1460	1460	1460	1460	
5°	1456	1456	1451	1456	1456	138
15°	1400	1402	1404	1417	1417	395
25°	1289	1296	1307	1330	1334	594
35°	1132	1145	1172	1202	1211	709
45°	938	957	1004	1053	1072	723
55°	710	740	820	897	925	633
65°	456	509	627	720	752	451
75°	198	288	418	496	507	213
85°	38	83	102	113	115	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1460.0	1460.0	1460.0	1460.0	1460.0
2.5°	1461.9	1460.0	1452.5	1460.0	1460.0
5°	1456.3	1456.3	1450.6	1456.3	1456.3
7.5°	1446.8	1446.8	1443.1	1450.6	1450.6
10°	1435.5	1435.5	1433.7	1443.1	1443.1
12.5°	1418.6	1420.5	1418.6	1429.9	1429.9
15°	1399.7	1401.6	1403.5	1416.7	1416.7
17.5°	1375.3	1379.0	1382.8	1397.9	1399.7
20°	1352.6	1354.5	1362.1	1379.0	1380.9
22.5°	1322.5	1328.2	1337.6	1354.5	1360.2
25°	1288.6	1296.1	1307.4	1330.0	1333.8
27.5°	1256.6	1262.2	1277.3	1301.8	1309.3
30°	1217.0	1226.4	1245.3	1269.8	1279.2
32.5°	1179.3	1188.7	1211.4	1237.7	1245.3
35°	1132.2	1145.4	1171.8	1201.9	1211.4
37.5°	1087.0	1100.2	1132.2	1166.1	1177.4
40°	1039.9	1055.0	1088.9	1128.5	1143.5
42.5°	989.1	1009.8	1047.5	1090.8	1107.7
45°	938.2	957.0	1004.1	1053.1	1071.9
47.5°	883.6	906.2	957.0	1015.4	1038.0
50°	825.2	853.4	911.8	975.9	1000.4
52.5°	766.8	798.8	864.7	936.3	962.7
55°	710.2	740.4	819.5	896.7	925.0
57.5°	648.1	685.7	772.4	855.3	883.6
60°	584.0	625.5	725.3	812.0	842.1
62.5°	520.0	567.1	680.1	766.8	798.8
65°	455.9	508.7	627.3	719.7	751.7
67.5°	393.7	452.1	578.4	670.7	702.7
70°	322.1	395.6	525.6	616.0	648.1
72.5°	256.2	341.0	474.7	559.5	587.8
75°	197.8	288.2	418.2	495.5	506.8
77.5°	145.1	235.5	359.8	386.2	388.1
80°	98.0	188.4	275.1	271.3	275.1
82.5°	64.1	141.3	173.3	194.0	195.9
85°	37.7	82.9	101.7	113.0	114.9
87.5°	18.8	28.3	35.8	37.7	41.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)