

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: P313717

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CA08-W2A-U-4000K**

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: P313717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-L83050-RDP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 4220.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

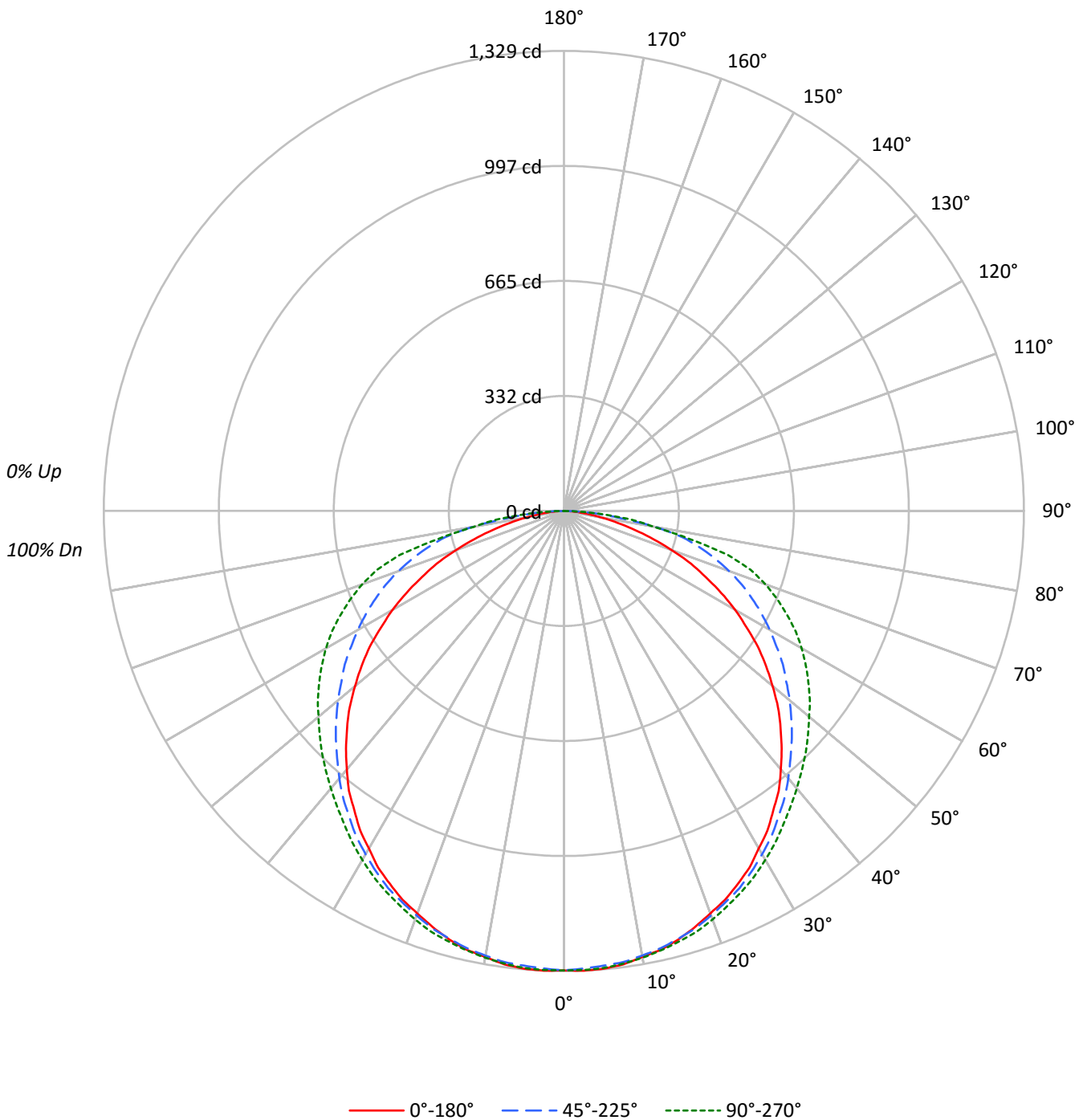
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1786	1786	1786
5°	1792	1781	1790
10°	1787	1782	1790
15°	1784	1781	1793
20°	1771	1780	1798
25°	1765	1784	1802
30°	1750	1779	1808
35°	1733	1774	1815
40°	1713	1772	1838
45°	1685	1772	1880
50°	1647	1783	1937
55°	1606	1812	2023
60°	1538	1848	2135
65°	1439	1912	2266
70°	1309	2001	2437
75°	1110	2111	2546
80°	876	2125	2060
85°	647	1616	1809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.9	3.0
10°-20°	362.3	8.6
20°-30°	554.0	13.1
30°-40°	677.3	16.0
40°-50°	721.9	17.1
50°-60°	690.2	16.4
60°-70°	584.7	13.9
70°-80°	393.0	9.3
80°-90°	110.8	2.6
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°	1042.2	24.7
0°-40°	1719.5	40.7
0°-60°	3131.5	74.2
0°-90°	4220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4220.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1327	1327	1327	1327	1327	
5°	1327	1325	1319	1325	1325	126
15°	1281	1281	1279	1289	1287	361
25°	1189	1193	1202	1212	1214	548
35°	1055	1063	1080	1101	1105	661
45°	885	900	932	971	988	683
55°	684	710	772	833	862	610
65°	452	498	601	680	712	449
75°	214	291	406	475	490	229
85°	42	86	105	113	117	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1327.1	1327.1	1327.1	1327.1	1327.1
2.5°	1329.2	1329.2	1322.9	1327.1	1327.1
5°	1327.1	1325.0	1318.7	1325.0	1325.0
7.5°	1320.8	1318.7	1314.5	1320.8	1318.7
10°	1308.2	1308.2	1304.0	1310.3	1310.3
12.5°	1297.8	1295.7	1293.6	1302.0	1299.9
15°	1281.0	1281.0	1278.9	1289.4	1287.3
17.5°	1260.1	1262.2	1264.3	1272.6	1274.7
20°	1237.1	1241.2	1243.3	1255.9	1255.9
22.5°	1216.1	1218.2	1222.4	1235.0	1235.0
25°	1188.9	1193.1	1201.5	1211.9	1214.0
27.5°	1161.7	1163.8	1174.3	1188.9	1191.0
30°	1126.1	1132.4	1145.0	1161.7	1163.8
32.5°	1094.7	1101.0	1115.7	1132.4	1136.6
35°	1055.0	1063.3	1080.1	1101.0	1105.2
37.5°	1019.4	1025.7	1046.6	1069.6	1075.9
40°	975.4	988.0	1008.9	1036.1	1046.6
42.5°	931.5	944.0	969.1	1004.7	1017.3
45°	885.4	900.1	931.5	971.2	988.0
47.5°	839.4	856.1	891.7	937.7	956.6
50°	787.0	808.0	851.9	904.2	925.2
52.5°	736.8	761.9	810.1	868.7	895.9
55°	684.5	709.6	772.4	833.1	862.4
57.5°	625.9	659.3	728.4	797.5	828.9
60°	571.4	602.8	686.6	761.9	793.3
62.5°	512.8	554.7	644.7	724.2	755.6
65°	452.1	498.2	600.7	680.3	711.7
67.5°	397.7	447.9	556.8	636.3	667.7
70°	332.8	395.6	508.6	588.2	619.6
72.5°	272.1	341.2	458.4	535.9	565.2
75°	213.5	291.0	406.1	475.1	489.8
77.5°	159.1	240.7	351.7	381.0	370.5
80°	113.0	192.6	274.2	259.6	265.8
82.5°	73.3	146.5	169.5	192.6	198.9
85°	41.9	85.8	104.7	113.0	117.2
87.5°	18.8	31.4	41.9	41.9	39.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)