

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: NEO-RAY

Report Number: P242504

Luminaire Tested: **S123DR-S1165D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242504
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S1165D835-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4572.5 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

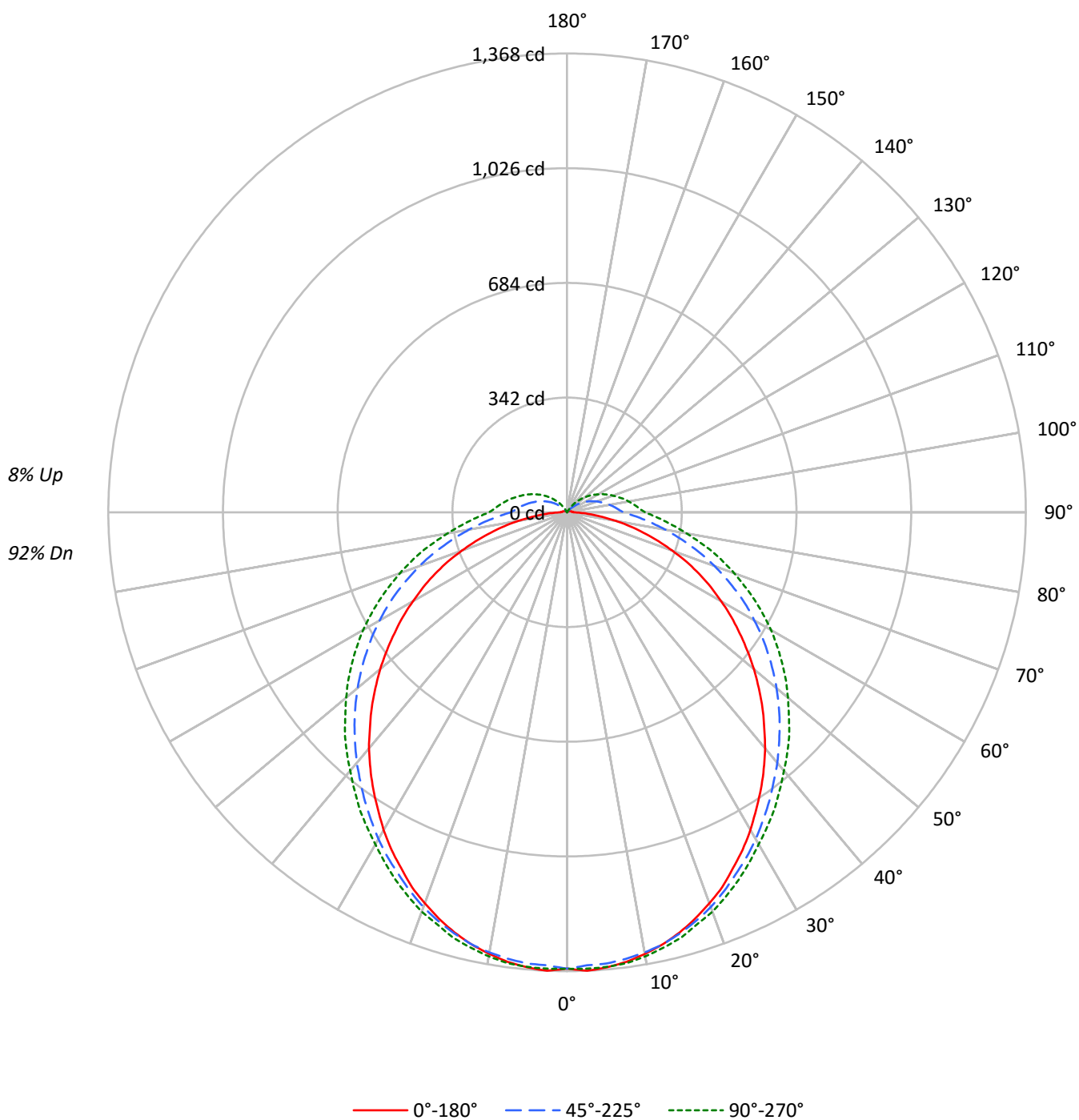
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16491	16491	16491
5°	16541	16046	16044
10°	16391	15648	15548
15°	16180	15202	15015
20°	15877	14698	14435
25°	15503	14123	13830
30°	15122	13605	13219
35°	14691	13059	12726
40°	14282	12561	12200
45°	13828	12081	11775
50°	13380	11604	11309
55°	12884	11118	10884
60°	12401	10620	10449
65°	11904	10091	9935
70°	11160	9493	9407
75°	10218	8812	8864
80°	9127	8131	8243
85°	8105	7619	7835

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.1	2.8
10°-20°	367.9	8.0
20°-30°	550.2	12.0
30°-40°	656.9	14.4
40°-50°	687.3	15.0
50°-60°	645.0	14.1
60°-70°	538.7	11.8
70°-80°	385.2	8.4
80°-90°	229.2	5.0
90°-100°	144.0	3.1
100°-110°	105.9	2.3
110°-120°	70.7	1.5
120°-130°	40.3	0.9
130°-140°	18.1	0.4
140°-150°	3.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1047.2	22.9
0°-40°	1704.1	37.3
0°-60°	3036.5	66.4
0°-90°	4189.7	91.6
90°-120°	320.6	7.0
90°-150°	382.8	8.4
90°-180°	383.0	8.4
0°-180°	4572.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1360	1360	1360	1360	1360	
5°	1362	1359	1350	1362	1360	129
15°	1297	1301	1300	1315	1313	365
25°	1171	1186	1190	1209	1209	540
35°	1008	1032	1051	1073	1079	630
45°	824	860	897	925	937	635
55°	628	677	731	771	782	563
65°	434	492	557	602	616	429
75°	236	305	379	428	446	252
85°	73	147	225	276	290	75
90°	19	92	168	218	233	14
95°	16	74	147	193	208	13
105°	12	47	111	153	166	12
115°	7	25	79	114	126	8
125°	4	4	47	79	89	4
135°	3	2	18	44	52	2
145°	2	0	0	12	18	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1360.5	1360.5	1360.5	1360.5	1360.5
2.5°	1368.0	1363.5	1351.7	1363.5	1362.0
5°	1362.0	1359.1	1350.2	1362.0	1360.5
7.5°	1351.7	1351.7	1342.8	1357.6	1356.1
10°	1336.8	1339.8	1332.4	1347.2	1344.2
12.5°	1319.0	1323.5	1319.0	1332.4	1329.4
15°	1296.8	1301.3	1299.8	1314.6	1313.1
17.5°	1270.1	1279.0	1277.6	1290.9	1287.9
20°	1240.5	1249.4	1252.4	1265.7	1267.2
22.5°	1209.4	1218.3	1222.7	1240.5	1239.0
25°	1170.8	1185.7	1190.1	1209.4	1209.4
27.5°	1133.8	1150.1	1159.0	1175.3	1176.8
30°	1093.8	1113.0	1124.9	1142.7	1142.7
32.5°	1049.3	1071.5	1087.8	1107.1	1111.6
35°	1007.8	1031.5	1050.8	1073.0	1079.0
37.5°	963.4	990.0	1012.3	1037.5	1041.9
40°	918.9	945.6	975.2	1000.4	1006.3
42.5°	870.0	904.1	935.2	963.4	972.2
45°	824.0	859.6	896.7	924.8	936.7
47.5°	775.1	815.1	856.6	887.8	896.7
50°	727.7	769.2	815.1	849.2	859.6
52.5°	677.3	721.8	773.6	809.2	822.6
55°	628.4	677.3	730.7	770.7	782.5
57.5°	581.0	631.4	689.2	729.2	742.5
60°	530.6	583.9	644.7	686.2	702.5
62.5°	483.2	538.0	603.2	644.7	659.5
65°	434.2	492.0	557.3	601.7	616.5
67.5°	385.3	446.1	511.3	560.2	572.1
70°	333.5	397.2	468.3	515.8	530.6
72.5°	286.0	349.8	423.9	472.8	487.6
75°	235.7	305.3	379.4	428.3	446.1
77.5°	192.7	262.3	336.4	388.3	401.6
80°	146.7	219.3	296.4	346.8	361.6
82.5°	106.7	180.8	259.4	309.8	324.6
85°	72.6	146.7	225.3	275.7	290.5
87.5°	44.5	118.6	194.2	244.5	259.4
90°	19.3	91.9	167.5	217.9	232.7
92.5°	17.8	81.5	155.6	204.5	217.9
95°	16.3	74.1	146.7	192.7	207.5
97.5°	14.8	68.2	137.8	182.3	197.1
100°	13.3	60.8	128.9	171.9	186.7
102.5°	11.9	53.4	120.0	161.5	176.4
105°	11.9	47.4	111.2	152.7	166.0
107.5°	10.4	41.5	102.3	142.3	155.6
110°	8.9	35.6	94.9	133.4	145.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.9	29.6	86.0	123.0	136.4
115°	7.4	25.2	78.6	114.1	126.0
117.5°	7.4	19.3	69.7	105.2	117.1
120°	5.9	13.3	62.2	96.3	106.7
122.5°	5.9	8.9	54.8	87.4	97.8
125°	4.4	4.4	47.4	78.6	88.9
127.5°	4.4	3.0	40.0	69.7	80.0
130°	4.4	3.0	32.6	60.8	69.7
132.5°	3.0	3.0	25.2	51.9	62.2
135°	3.0	1.5	17.8	44.5	51.9
137.5°	3.0	1.5	11.9	35.6	43.0
140°	1.5	1.5	5.9	28.2	35.6
142.5°	1.5	0.0	0.0	19.3	26.7
145°	1.5	0.0	0.0	11.9	17.8
147.5°	0.0	0.0	0.0	4.4	10.4
150°	0.0	0.0	0.0	0.0	3.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)