

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: P242519

Luminaire Tested: **S123DR-S1165D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242519
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-S1165D935-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3937.0 lumens
Efficiency: N/A
Efficacy: 95.8 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

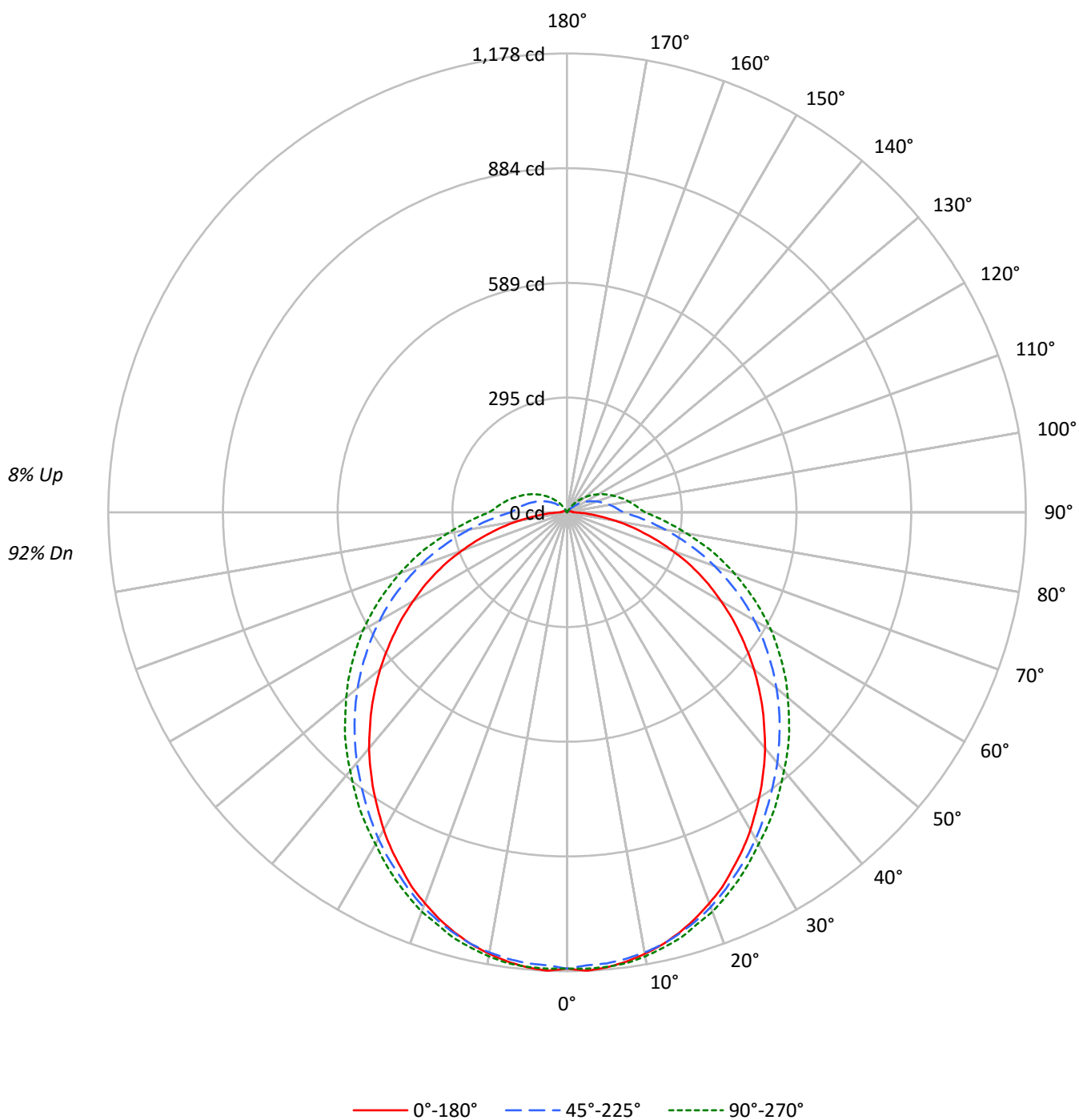
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	14199	14199	14199
5°	14242	13816	13814
10°	14113	13473	13387
15°	13932	13088	12928
20°	13671	12655	12428
25°	13349	12160	11908
30°	13019	11714	11380
35°	12649	11243	10957
40°	12297	10815	10505
45°	11906	10401	10138
50°	11519	9991	9737
55°	11094	9572	9372
60°	10676	9144	8998
65°	10251	8688	8554
70°	9607	8174	8098
75°	8796	7588	7632
80°	7858	7001	7098
85°	6977	6560	6746

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	2.8
10°-20°	316.8	8.0
20°-30°	473.7	12.0
30°-40°	565.6	14.4
40°-50°	591.8	15.0
50°-60°	555.3	14.1
60°-70°	463.9	11.8
70°-80°	331.7	8.4
80°-90°	197.4	5.0
90°-100°	124.0	3.2
100°-110°	91.1	2.3
110°-120°	60.9	1.5
120°-130°	34.7	0.9
130°-140°	15.6	0.4
140°-150°	3.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	901.6	22.9
0°-40°	1467.2	37.3
0°-60°	2614.4	66.4
0°-90°	3607.3	91.6
90°-120°	276.0	7.0
90°-150°	329.6	8.4
90°-180°	330.0	8.4
0°-180°	3937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1171	1171	1171	1171	1171	
5°	1173	1170	1162	1173	1171	111
15°	1117	1120	1119	1132	1131	315
25°	1008	1021	1025	1041	1041	465
35°	868	888	905	924	929	543
45°	710	740	772	796	806	547
55°	541	583	629	664	674	484
65°	374	424	480	518	531	370
75°	203	263	327	369	384	217
85°	62	126	194	237	250	64
90°	17	79	144	188	200	12
95°	14	64	126	166	179	11
105°	10	41	96	131	143	10
115°	6	22	68	98	108	7
125°	4	4	41	68	77	4
135°	3	1	15	38	45	2
145°	1	0	0	10	15	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°	1171.4	1171.4	1171.4	1171.4	1171.4
2.5°	1177.8	1174.0	1163.8	1174.0	1172.7
5°	1172.7	1170.2	1162.5	1172.7	1171.4
7.5°	1163.8	1163.8	1156.1	1168.9	1167.6
10°	1151.0	1153.6	1147.2	1159.9	1157.4
12.5°	1135.7	1139.5	1135.7	1147.2	1144.6
15°	1116.6	1120.4	1119.1	1131.9	1130.6
17.5°	1093.6	1101.2	1100.0	1111.5	1108.9
20°	1068.1	1075.7	1078.3	1089.8	1091.0
22.5°	1041.3	1048.9	1052.8	1068.1	1066.8
25°	1008.1	1020.9	1024.7	1041.3	1041.3
27.5°	976.2	990.2	997.9	1011.9	1013.2
30°	941.7	958.3	968.5	983.8	983.8
32.5°	903.5	922.6	936.6	953.2	957.1
35°	867.7	888.1	904.7	923.9	929.0
37.5°	829.4	852.4	871.6	893.2	897.1
40°	791.2	814.1	839.7	861.3	866.5
42.5°	749.1	778.4	805.2	829.4	837.1
45°	709.5	740.1	772.0	796.3	806.5
47.5°	667.4	701.8	737.6	764.4	772.0
50°	626.5	662.3	701.8	731.2	740.1
52.5°	583.2	621.4	666.1	696.7	708.2
55°	541.1	583.2	629.1	663.6	673.8
57.5°	500.2	543.6	593.4	627.8	639.3
60°	456.8	502.8	555.1	590.8	604.9
62.5°	416.0	463.2	519.4	555.1	567.9
65°	373.9	423.7	479.8	518.1	530.8
67.5°	331.8	384.1	440.2	482.4	492.6
70°	287.1	342.0	403.2	444.1	456.8
72.5°	246.3	301.2	365.0	407.1	419.8
75°	202.9	262.9	326.7	368.8	384.1
77.5°	165.9	225.9	289.7	334.3	345.8
80°	126.3	188.9	255.2	298.6	311.4
82.5°	91.9	155.7	223.3	266.7	279.5
85°	62.5	126.3	194.0	237.3	250.1
87.5°	38.3	102.1	167.2	210.6	223.3
90°	16.6	79.1	144.2	187.6	200.3
92.5°	15.3	70.2	134.0	176.1	187.6
95°	14.0	63.8	126.3	165.9	178.6
97.5°	12.8	58.7	118.7	157.0	169.7
100°	11.5	52.3	111.0	148.0	160.8
102.5°	10.2	45.9	103.4	139.1	151.9
105°	10.2	40.8	95.7	131.4	142.9
107.5°	8.9	35.7	88.0	122.5	134.0
110°	7.7	30.6	81.7	114.8	125.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.7	25.5	74.0	105.9	117.4
115°	6.4	21.7	67.6	98.3	108.5
117.5°	6.4	16.6	60.0	90.6	100.8
120°	5.1	11.5	53.6	82.9	91.9
122.5°	5.1	7.7	47.2	75.3	84.2
125°	3.8	3.8	40.8	67.6	76.6
127.5°	3.8	2.6	34.5	60.0	68.9
130°	3.8	2.6	28.1	52.3	60.0
132.5°	2.6	2.6	21.7	44.7	53.6
135°	2.6	1.3	15.3	38.3	44.7
137.5°	2.6	1.3	10.2	30.6	37.0
140°	1.3	1.3	5.1	24.2	30.6
142.5°	1.3	0.0	0.0	16.6	23.0
145°	1.3	0.0	0.0	10.2	15.3
147.5°	0.0	0.0	0.0	3.8	8.9
150°	0.0	0.0	0.0	0.0	2.6
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)