

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: P243360

Luminaire Tested: **S123DR-H1165D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243360
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H1165D830-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4315.4 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

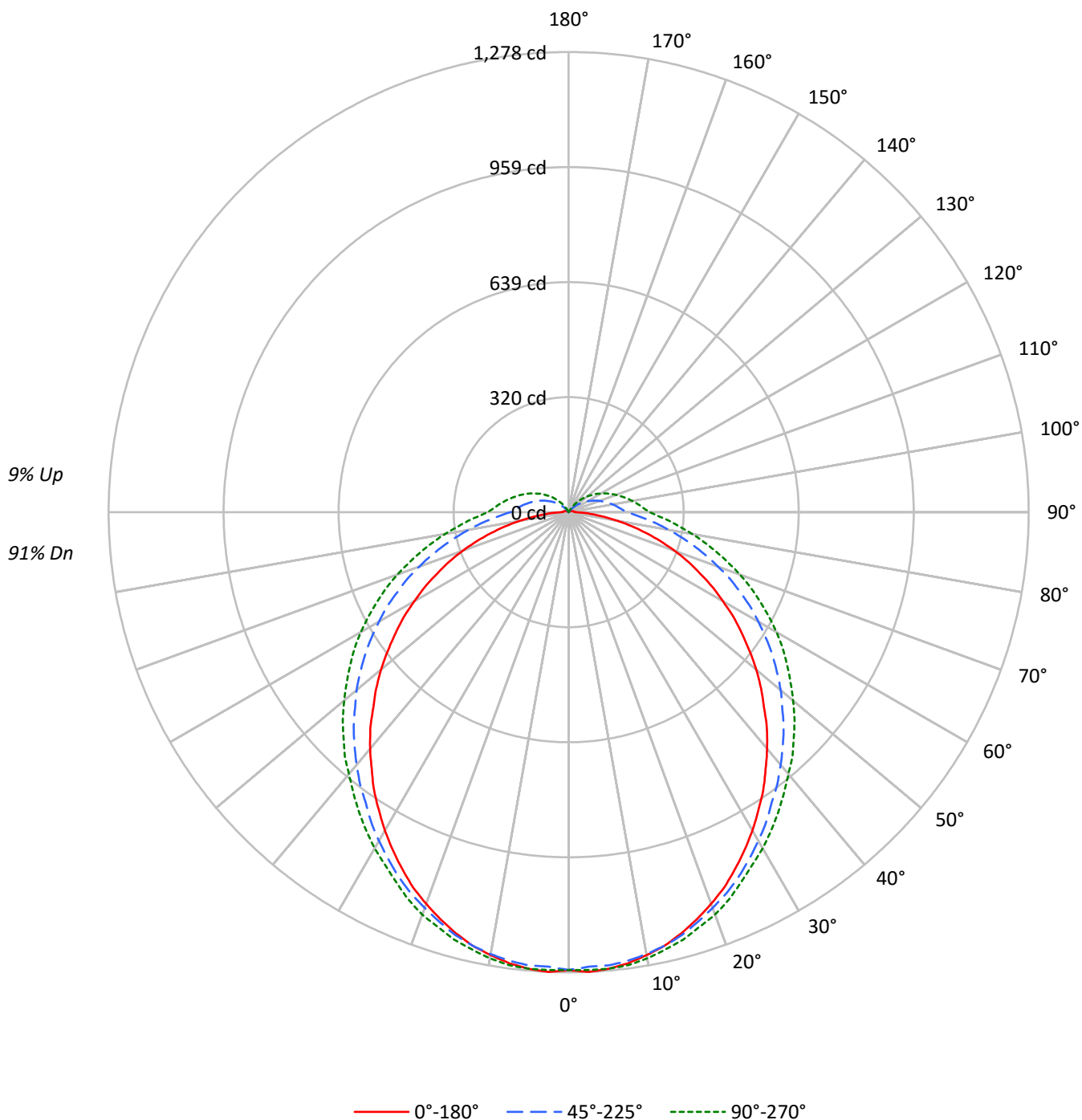
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0		
RCR																				
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91		
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62	60		
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31		
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30	28		
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25		
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22		
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15411	15411	15411
5°	15458	15016	15009
10°	15314	14636	14553
15°	15103	14219	14053
20°	14814	13724	13547
25°	14484	13263	12963
30°	14114	12748	12469
35°	13741	12225	11978
40°	13333	11799	11509
45°	12881	11378	11116
50°	12504	10948	10709
55°	12041	10509	10308
60°	11557	10024	9920
65°	11049	9506	9443
70°	10471	8950	8980
75°	9598	8345	8431
80°	8499	7747	7949
85°	7547	7264	7582

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	2.8
10°-20°	344.2	8.0
20°-30°	515.4	11.9
30°-40°	616.7	14.3
40°-50°	646.7	15.0
50°-60°	608.0	14.1
60°-70°	508.8	11.8
70°-80°	365.1	8.5
80°-90°	218.7	5.1
90°-100°	138.7	3.2
100°-110°	102.2	2.4
110°-120°	68.4	1.6
120°-130°	39.5	0.9
130°-140°	18.2	0.4
140°-150°	4.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	980.3	22.7
0°-40°	1597.0	37.0
0°-60°	2851.7	66.1
0°-90°	3944.3	91.4
90°-120°	309.2	7.2
90°-150°	371.1	8.6
90°-180°	371.0	8.6
0°-180°	4315.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1271	1271	1271	1271	1271	
5°	1273	1271	1264	1274	1273	121
15°	1210	1218	1216	1232	1229	341
25°	1094	1108	1118	1135	1134	504
35°	943	965	984	1009	1016	589
45°	768	806	844	874	884	594
55°	587	636	691	728	741	526
65°	403	463	525	571	586	400
75°	221	289	359	408	424	235
85°	68	138	215	264	281	69
90°	19	88	162	211	225	13
95°	15	72	140	186	200	12
105°	11	46	107	147	159	11
115°	7	24	76	110	122	7
125°	5	5	46	76	86	4
135°	3	1	20	44	52	2
145°	1	0	0	13	19	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°	1271.4	1271.4	1271.4	1271.4	1271.4
2.5°	1278.1	1274.1	1263.5	1275.4	1272.8
5°	1272.8	1271.4	1263.5	1274.1	1272.8
7.5°	1263.5	1263.5	1256.9	1268.8	1268.8
10°	1248.9	1252.9	1246.2	1259.5	1258.2
12.5°	1233.0	1238.3	1233.0	1247.6	1243.6
15°	1210.5	1218.4	1215.8	1231.7	1229.0
17.5°	1185.3	1194.5	1193.2	1209.1	1207.8
20°	1157.4	1169.4	1169.4	1185.3	1189.2
22.5°	1128.3	1141.5	1145.5	1161.4	1164.0
25°	1093.8	1108.4	1117.6	1134.9	1133.6
27.5°	1058.0	1075.2	1085.8	1104.4	1104.4
30°	1020.9	1040.7	1054.0	1073.9	1077.9
32.5°	981.1	1005.0	1020.9	1042.1	1047.4
35°	942.6	965.2	983.7	1008.9	1015.6
37.5°	898.9	926.7	951.9	978.4	982.4
40°	857.8	888.3	916.1	944.0	949.3
42.5°	815.4	847.2	880.3	908.2	920.1
45°	767.6	806.1	844.5	873.7	884.3
47.5°	725.2	763.7	804.8	839.2	851.2
50°	680.1	719.9	769.0	802.1	814.0
52.5°	633.7	677.5	729.2	765.0	776.9
55°	587.3	636.4	690.7	727.9	741.1
57.5°	543.6	592.6	649.6	690.7	705.3
60°	494.5	548.9	608.5	651.0	666.9
62.5°	450.8	506.5	568.8	611.2	627.1
65°	403.0	462.7	525.0	571.4	586.0
67.5°	359.3	417.6	485.2	531.6	547.6
70°	312.9	373.9	441.5	489.2	506.5
72.5°	266.5	331.4	400.4	449.4	464.0
75°	221.4	289.0	359.3	408.3	424.3
77.5°	179.0	246.6	319.5	368.6	385.8
80°	136.6	206.8	282.4	331.4	348.7
82.5°	99.4	171.0	247.9	295.7	311.6
85°	67.6	137.9	214.8	263.8	281.1
87.5°	39.8	111.4	185.6	234.7	249.2
90°	18.6	87.5	161.7	210.8	225.4
92.5°	17.2	78.2	149.8	196.2	210.8
95°	14.6	71.6	140.5	185.6	200.2
97.5°	14.6	65.0	132.6	176.3	189.6
100°	13.3	58.3	124.6	165.7	179.0
102.5°	11.9	51.7	115.3	156.4	169.7
105°	10.6	46.4	107.4	147.2	159.1
107.5°	9.3	39.8	99.4	137.9	149.8
110°	9.3	34.5	91.5	128.6	140.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.0	29.2	83.5	119.3	131.3
115°	6.6	23.9	75.6	110.0	122.0
117.5°	6.6	18.6	67.6	102.1	112.7
120°	6.6	14.6	61.0	92.8	103.4
122.5°	5.3	9.3	54.4	84.9	95.5
125°	5.3	5.3	46.4	75.6	86.2
127.5°	4.0	2.7	39.8	67.6	76.9
130°	4.0	2.7	33.1	59.7	68.9
132.5°	2.7	2.7	26.5	51.7	61.0
135°	2.7	1.3	19.9	43.8	51.7
137.5°	2.7	1.3	13.3	35.8	43.8
140°	1.3	1.3	6.6	27.8	35.8
142.5°	1.3	0.0	1.3	21.2	27.8
145°	1.3	0.0	0.0	13.3	18.6
147.5°	1.3	0.0	0.0	6.6	11.9
150°	1.3	0.0	0.0	0.0	4.0
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)