

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: P243374

Luminaire Tested: **S123DR-H1165D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243374
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-H1165D930-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3732.8 lumens
Efficiency: N/A
Efficacy: 99.0 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

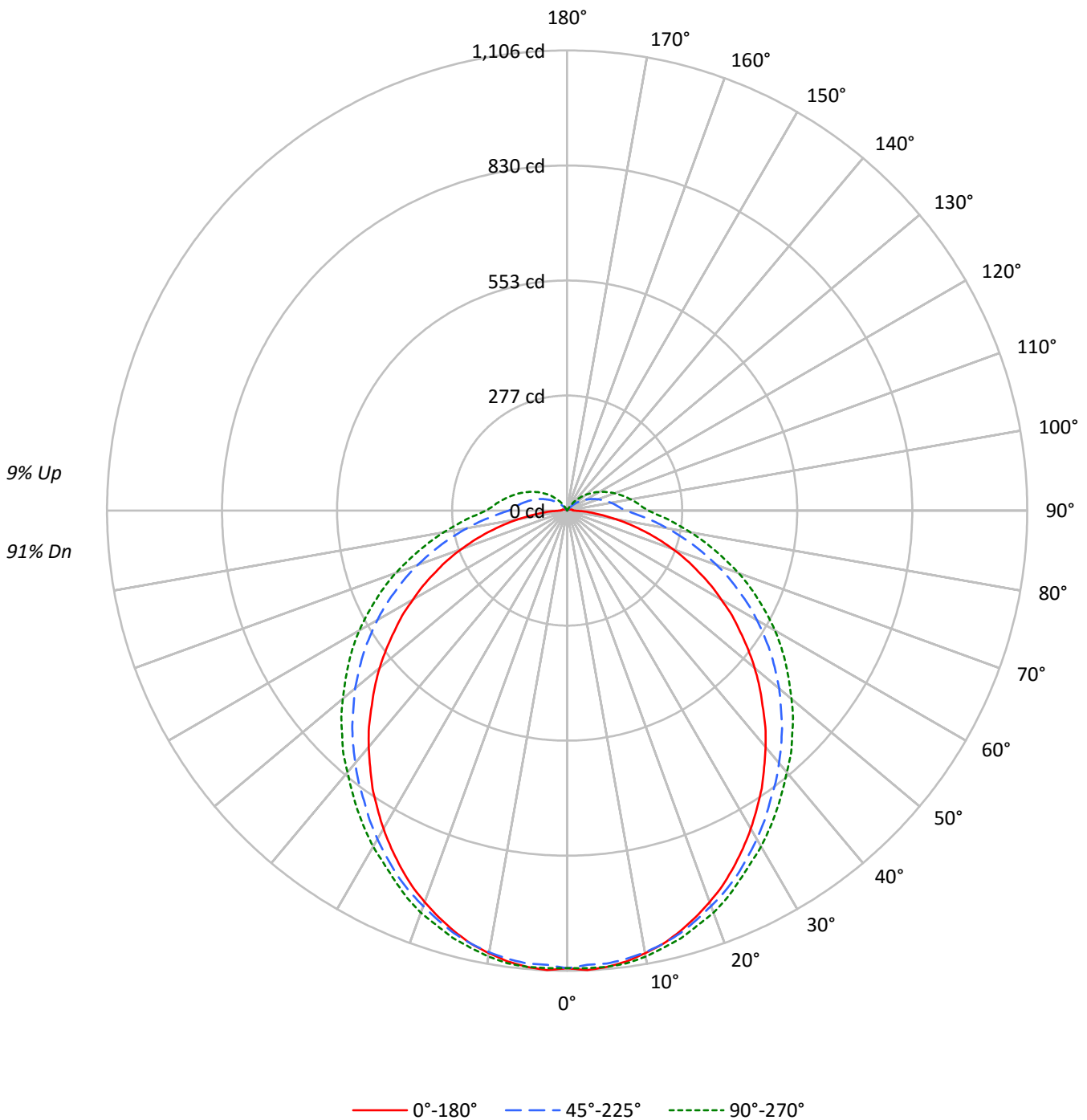
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	13331	13331	13331
5°	13370	12988	12982
10°	13246	12660	12588
15°	13063	12299	12156
20°	12814	11871	11718
25°	12528	11473	11212
30°	12207	11027	10786
35°	11887	10575	10361
40°	11533	10206	9955
45°	11143	9842	9616
50°	10817	9470	9263
55°	10416	9091	8917
60°	9999	8671	8580
65°	9558	8222	8169
70°	9055	7742	7767
75°	8302	7219	7292
80°	7348	6702	6875
85°	6531	6283	6557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	2.8
10°-20°	297.7	8.0
20°-30°	445.8	11.9
30°-40°	533.5	14.3
40°-50°	559.4	15.0
50°-60°	525.9	14.1
60°-70°	440.1	11.8
70°-80°	315.8	8.5
80°-90°	189.2	5.1
90°-100°	119.9	3.2
100°-110°	88.4	2.4
110°-120°	59.2	1.6
120°-130°	34.1	0.9
130°-140°	15.7	0.4
140°-150°	3.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	847.9	22.7
0°-40°	1381.4	37.0
0°-60°	2466.7	66.1
0°-90°	3411.8	91.4
90°-120°	267.5	7.2
90°-150°	320.9	8.6
90°-180°	321.0	8.6
0°-180°	3732.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1101	1100	1093	1102	1101	104
15°	1047	1054	1052	1065	1063	295
25°	946	959	967	982	980	436
35°	815	835	851	873	878	509
45°	664	697	730	756	765	514
55°	508	550	598	630	641	455
65°	349	400	454	494	507	346
75°	192	250	311	353	367	203
85°	58	119	186	228	243	60
90°	16	76	140	182	195	11
95°	13	62	122	161	173	10
105°	9	40	93	127	138	10
115°	6	21	65	95	106	6
125°	5	5	40	65	74	4
135°	2	1	17	38	45	2
145°	1	0	0	12	16	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°	1099.8	1099.8	1099.8	1099.8	1099.8
2.5°	1105.5	1102.1	1092.9	1103.2	1100.9
5°	1100.9	1099.8	1092.9	1102.1	1100.9
7.5°	1092.9	1092.9	1087.2	1097.5	1097.5
10°	1080.3	1083.7	1078.0	1089.5	1088.3
12.5°	1066.5	1071.1	1066.5	1079.2	1075.7
15°	1047.0	1053.9	1051.6	1065.4	1063.1
17.5°	1025.3	1033.3	1032.1	1045.9	1044.7
20°	1001.2	1011.5	1011.5	1025.3	1028.7
22.5°	975.9	987.4	990.8	1004.6	1006.9
25°	946.1	958.7	966.8	981.7	980.5
27.5°	915.2	930.1	939.2	955.3	955.3
30°	883.0	900.2	911.7	928.9	932.4
32.5°	848.6	869.3	883.0	901.4	906.0
35°	815.4	834.9	850.9	872.7	878.5
37.5°	777.5	801.6	823.4	846.3	849.8
40°	742.0	768.4	792.4	816.5	821.1
42.5°	705.3	732.8	761.5	785.6	795.9
45°	664.0	697.3	730.5	755.7	764.9
47.5°	627.3	660.6	696.1	725.9	736.3
50°	588.3	622.7	665.2	693.8	704.1
52.5°	548.2	586.0	630.7	661.7	672.0
55°	508.0	550.5	597.5	629.6	641.1
57.5°	470.2	512.6	561.9	597.5	610.1
60°	427.8	474.8	526.4	563.1	576.8
62.5°	389.9	438.1	492.0	528.7	542.4
65°	348.6	400.2	454.1	494.3	506.9
67.5°	310.8	361.2	419.7	459.9	473.6
70°	270.6	323.4	381.9	423.2	438.1
72.5°	230.5	286.7	346.3	388.8	401.4
75°	191.5	250.0	310.8	353.2	367.0
77.5°	154.8	213.3	276.4	318.8	333.7
80°	118.1	178.9	244.3	286.7	301.6
82.5°	86.0	147.9	214.5	255.7	269.5
85°	58.5	119.3	185.8	228.2	243.1
87.5°	34.4	96.3	160.6	203.0	215.6
90°	16.1	75.7	139.9	182.3	195.0
92.5°	14.9	67.7	129.6	169.7	182.3
95°	12.6	61.9	121.6	160.6	173.2
97.5°	12.6	56.2	114.7	152.5	164.0
100°	11.5	50.5	107.8	143.4	154.8
102.5°	10.3	44.7	99.8	135.3	146.8
105°	9.2	40.1	92.9	127.3	137.6
107.5°	8.0	34.4	86.0	119.3	129.6
110°	8.0	29.8	79.1	111.2	121.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.9	25.2	72.2	103.2	113.5
115°	5.7	20.6	65.4	95.2	105.5
117.5°	5.7	16.1	58.5	88.3	97.5
120°	5.7	12.6	52.8	80.3	89.5
122.5°	4.6	8.0	47.0	73.4	82.6
125°	4.6	4.6	40.1	65.4	74.5
127.5°	3.4	2.3	34.4	58.5	66.5
130°	3.4	2.3	28.7	51.6	59.6
132.5°	2.3	2.3	22.9	44.7	52.8
135°	2.3	1.1	17.2	37.8	44.7
137.5°	2.3	1.1	11.5	31.0	37.8
140°	1.1	1.1	5.7	24.1	31.0
142.5°	1.1	0.0	1.1	18.3	24.1
145°	1.1	0.0	0.0	11.5	16.1
147.5°	1.1	0.0	0.0	5.7	10.3
150°	1.1	0.0	0.0	0.0	3.4
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)