

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: P243363

Luminaire Tested: **S123DR-H1000D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243363
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-H1000D835-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3919.3 lumens
Efficiency: N/A
Efficacy: 124.4 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

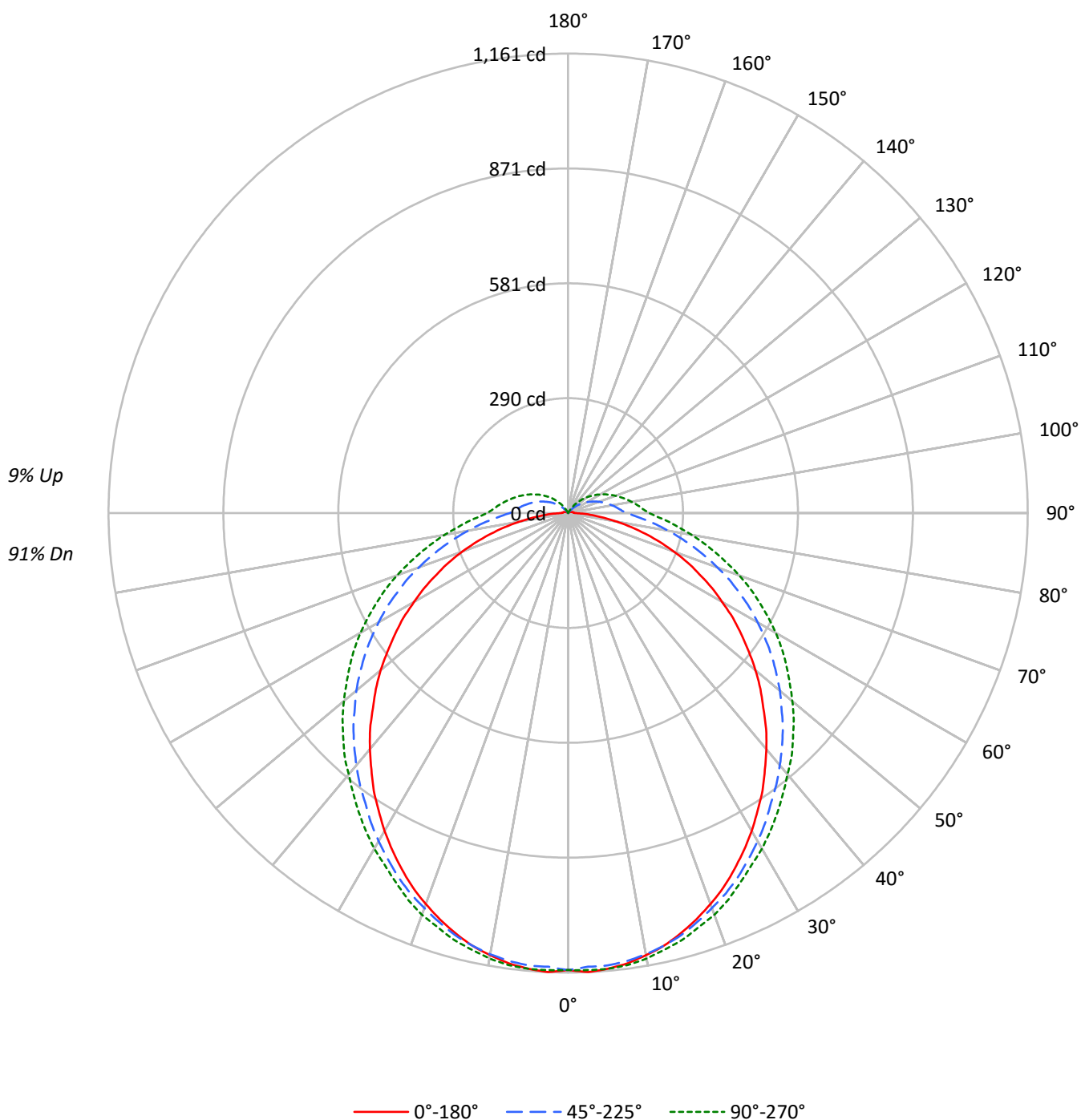
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13996	13996	13996
5°	14038	13637	13631
10°	13908	13293	13217
15°	13716	12914	12763
20°	13454	12464	12304
25°	13154	12046	11773
30°	12818	11578	11324
35°	12480	11103	10878
40°	12109	10716	10452
45°	11700	10334	10096
50°	11357	9943	9726
55°	10936	9544	9362
60°	10496	9104	9009
65°	10035	8633	8576
70°	9510	8129	8155
75°	8718	7579	7656
80°	7715	7037	7219
85°	6854	6598	6886

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	2.8
10°-20°	312.6	8.0
20°-30°	468.1	11.9
30°-40°	560.1	14.3
40°-50°	587.3	15.0
50°-60°	552.2	14.1
60°-70°	462.1	11.8
70°-80°	331.6	8.5
80°-90°	198.6	5.1
90°-100°	125.9	3.2
100°-110°	92.8	2.4
110°-120°	62.1	1.6
120°-130°	35.8	0.9
130°-140°	16.5	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°	890.3	22.7
0°-40°	1450.4	37.0
0°-60°	2589.9	66.1
0°-90°	3582.3	91.4
90°-120°	280.9	7.2
90°-150°	337.0	8.6
90°-180°	337.0	8.6
0°-180°	3919.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1155	1155	1155	1155	1155	
5°	1156	1155	1148	1157	1156	110
15°	1099	1107	1104	1119	1116	310
25°	993	1007	1015	1031	1030	457
35°	856	877	893	916	922	535
45°	697	732	767	794	803	539
55°	533	578	627	661	673	478
65°	366	420	477	519	532	363
75°	201	262	326	371	385	214
85°	61	125	195	240	255	63
90°	17	80	147	192	205	12
95°	13	65	128	169	182	11
105°	10	42	98	134	144	10
115°	6	22	69	100	111	7
125°	5	5	42	69	78	4
135°	2	1	18	40	47	2
145°	1	0	0	12	17	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°	1154.7	1154.7	1154.7	1154.7	1154.7
2.5°	1160.8	1157.1	1147.5	1158.3	1155.9
5°	1155.9	1154.7	1147.5	1157.1	1155.9
7.5°	1147.5	1147.5	1141.5	1152.3	1152.3
10°	1134.3	1137.9	1131.9	1143.9	1142.7
12.5°	1119.8	1124.6	1119.8	1133.1	1129.4
15°	1099.3	1106.6	1104.2	1118.6	1116.2
17.5°	1076.5	1084.9	1083.7	1098.1	1096.9
20°	1051.2	1062.0	1062.0	1076.5	1080.1
22.5°	1024.7	1036.7	1040.3	1054.8	1057.2
25°	993.4	1006.6	1015.1	1030.7	1029.5
27.5°	960.9	976.5	986.2	1003.0	1003.0
30°	927.2	945.2	957.3	975.3	978.9
32.5°	891.0	912.7	927.2	946.4	951.2
35°	856.1	876.6	893.4	916.3	922.3
37.5°	816.4	841.7	864.5	888.6	892.2
40°	779.1	806.7	832.0	857.3	862.1
42.5°	740.5	769.4	799.5	824.8	835.6
45°	697.2	732.1	767.0	793.5	803.1
47.5°	658.6	693.6	730.9	762.2	773.0
50°	617.7	653.8	698.4	728.5	739.3
52.5°	575.6	615.3	662.3	694.8	705.6
55°	533.4	578.0	627.3	661.0	673.1
57.5°	493.7	538.2	590.0	627.3	640.6
60°	449.1	498.5	552.7	591.2	605.7
62.5°	409.4	460.0	516.6	555.1	569.5
65°	366.0	420.2	476.8	519.0	532.2
67.5°	326.3	379.3	440.7	482.8	497.3
70°	284.2	339.6	401.0	444.3	460.0
72.5°	242.0	301.0	363.6	408.2	421.4
75°	201.1	262.5	326.3	370.9	385.3
77.5°	162.6	224.0	290.2	334.7	350.4
80°	124.0	187.8	256.5	301.0	316.7
82.5°	90.3	155.3	225.2	268.5	283.0
85°	61.4	125.2	195.1	239.6	255.3
87.5°	36.1	101.1	168.6	213.1	226.4
90°	16.9	79.5	146.9	191.5	204.7
92.5°	15.7	71.0	136.1	178.2	191.5
95°	13.2	65.0	127.6	168.6	181.8
97.5°	13.2	59.0	120.4	160.1	172.2
100°	12.0	53.0	113.2	150.5	162.6
102.5°	10.8	47.0	104.8	142.1	154.1
105°	9.6	42.1	97.5	133.7	144.5
107.5°	8.4	36.1	90.3	125.2	136.1
110°	8.4	31.3	83.1	116.8	127.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.2	26.5	75.9	108.4	119.2
115°	6.0	21.7	68.6	99.9	110.8
117.5°	6.0	16.9	61.4	92.7	102.3
120°	6.0	13.2	55.4	84.3	93.9
122.5°	4.8	8.4	49.4	77.1	86.7
125°	4.8	4.8	42.1	68.6	78.3
127.5°	3.6	2.4	36.1	61.4	69.8
130°	3.6	2.4	30.1	54.2	62.6
132.5°	2.4	2.4	24.1	47.0	55.4
135°	2.4	1.2	18.1	39.7	47.0
137.5°	2.4	1.2	12.0	32.5	39.7
140°	1.2	1.2	6.0	25.3	32.5
142.5°	1.2	0.0	1.2	19.3	25.3
145°	1.2	0.0	0.0	12.0	16.9
147.5°	1.2	0.0	0.0	6.0	10.8
150°	1.2	0.0	0.0	0.0	3.6
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)