

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: P243369

Luminaire Tested: **S123DR-H1165D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243369
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-H1165D840-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4623.6 lumens
Efficiency: N/A
Efficacy: 122.6 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

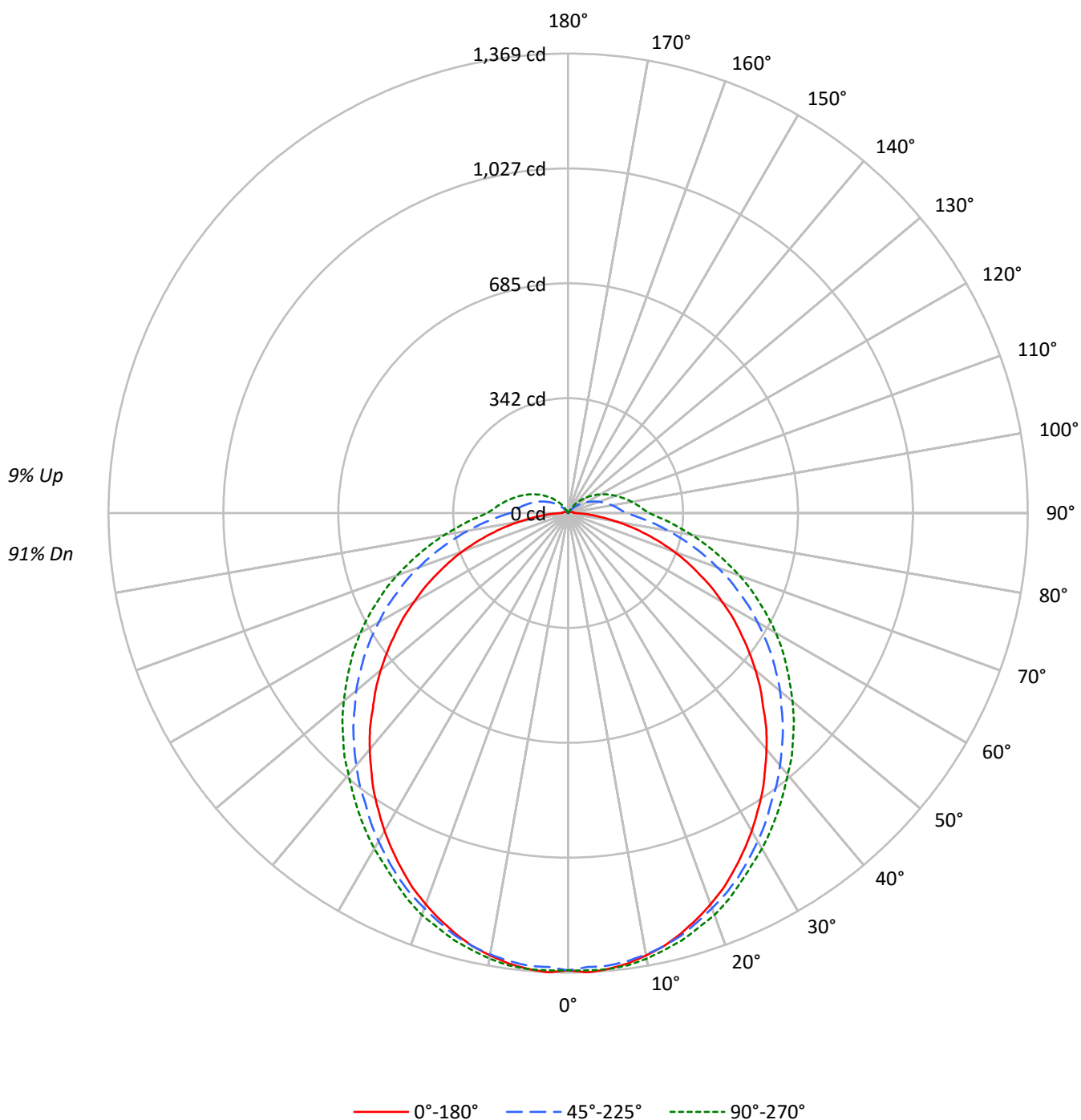
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	16513	16513	16513
5°	16562	16088	16081
10°	16407	15682	15592
15°	16181	15234	15057
20°	15872	14704	14515
25°	15518	14211	13888
30°	15122	13659	13360
35°	14724	13099	12833
40°	14285	12643	12331
45°	13802	12192	11911
50°	13398	11730	11475
55°	12903	11261	11046
60°	12382	10740	10628
65°	11839	10185	10119
70°	11217	9589	9620
75°	10283	8942	9033
80°	9102	8301	8516
85°	8082	7781	8121

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.3	2.8
10°-20°	368.7	8.0
20°-30°	552.2	11.9
30°-40°	660.8	14.3
40°-50°	692.9	15.0
50°-60°	651.4	14.1
60°-70°	545.2	11.8
70°-80°	391.2	8.5
80°-90°	234.3	5.1
90°-100°	148.6	3.2
100°-110°	109.5	2.4
110°-120°	73.3	1.6
120°-130°	42.3	0.9
130°-140°	19.5	0.4
140°-150°	4.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1050.3	22.7
0°-40°	1711.1	37.0
0°-60°	3055.4	66.1
0°-90°	4226.1	91.4
90°-120°	331.3	7.2
90°-150°	397.5	8.6
90°-180°	398.0	8.6
0°-180°	4623.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1362	1362	1362	1362	1362	
5°	1364	1362	1354	1365	1364	129
15°	1297	1305	1303	1320	1317	365
25°	1172	1188	1198	1216	1214	540
35°	1010	1034	1054	1081	1088	631
45°	822	864	905	936	948	636
55°	629	682	740	780	794	564
65°	432	496	562	612	628	429
75°	237	310	385	438	455	252
85°	72	148	230	283	301	74
90°	20	94	173	226	242	14
95°	16	77	151	199	214	13
105°	11	50	115	158	170	12
115°	7	26	81	118	131	8
125°	6	6	50	81	92	5
135°	3	1	21	47	55	2
145°	1	0	0	14	20	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°	1362.3	1362.3	1362.3	1362.3	1362.3
2.5°	1369.4	1365.1	1353.7	1366.5	1363.7
5°	1363.7	1362.3	1353.7	1365.1	1363.7
7.5°	1353.7	1353.7	1346.6	1359.4	1359.4
10°	1338.1	1342.4	1335.3	1349.5	1348.0
12.5°	1321.1	1326.7	1321.1	1336.7	1332.4
15°	1296.9	1305.4	1302.6	1319.6	1316.8
17.5°	1269.9	1279.9	1278.4	1295.5	1294.1
20°	1240.1	1252.9	1252.9	1269.9	1274.2
22.5°	1208.8	1223.0	1227.3	1244.4	1247.2
25°	1171.9	1187.5	1197.5	1215.9	1214.5
27.5°	1133.6	1152.0	1163.4	1183.3	1183.3
30°	1093.8	1115.1	1129.3	1150.6	1154.9
32.5°	1051.2	1076.7	1093.8	1116.5	1122.2
35°	1010.0	1034.1	1054.0	1081.0	1088.1
37.5°	963.1	992.9	1019.9	1048.3	1052.6
40°	919.1	951.7	981.6	1011.4	1017.1
42.5°	873.6	907.7	943.2	973.0	985.8
45°	822.5	863.7	904.9	936.1	947.5
47.5°	777.0	818.2	862.2	899.2	912.0
50°	728.7	771.3	823.9	859.4	872.2
52.5°	679.0	725.9	781.3	819.6	832.4
55°	629.3	681.8	740.1	779.9	794.1
57.5°	582.4	635.0	696.0	740.1	755.7
60°	529.8	588.1	652.0	697.5	714.5
62.5°	483.0	542.6	609.4	654.8	671.9
65°	431.8	495.8	562.5	612.2	627.9
67.5°	385.0	447.5	519.9	569.6	586.7
70°	335.2	400.6	473.0	524.2	542.6
72.5°	285.5	355.1	429.0	481.5	497.2
75°	237.2	309.7	385.0	437.5	454.6
77.5°	191.8	264.2	342.3	394.9	413.4
80°	146.3	221.6	302.6	355.1	373.6
82.5°	106.5	183.2	265.6	316.8	333.8
85°	72.4	147.7	230.1	282.7	301.1
87.5°	42.6	119.3	198.9	251.4	267.1
90°	19.9	93.8	173.3	225.9	241.5
92.5°	18.5	83.8	160.5	210.2	225.9
95°	15.6	76.7	150.6	198.9	214.5
97.5°	15.6	69.6	142.0	188.9	203.1
100°	14.2	62.5	133.5	177.6	191.8
102.5°	12.8	55.4	123.6	167.6	181.8
105°	11.4	49.7	115.1	157.7	170.5
107.5°	9.9	42.6	106.5	147.7	160.5
110°	9.9	36.9	98.0	137.8	150.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.5	31.3	89.5	127.8	140.6
115°	7.1	25.6	81.0	117.9	130.7
117.5°	7.1	19.9	72.4	109.4	120.7
120°	7.1	15.6	65.3	99.4	110.8
122.5°	5.7	9.9	58.2	90.9	102.3
125°	5.7	5.7	49.7	81.0	92.3
127.5°	4.3	2.8	42.6	72.4	82.4
130°	4.3	2.8	35.5	63.9	73.9
132.5°	2.8	2.8	28.4	55.4	65.3
135°	2.8	1.4	21.3	46.9	55.4
137.5°	2.8	1.4	14.2	38.4	46.9
140°	1.4	1.4	7.1	29.8	38.4
142.5°	1.4	0.0	1.4	22.7	29.8
145°	1.4	0.0	0.0	14.2	19.9
147.5°	1.4	0.0	0.0	7.1	12.8
150°	1.4	0.0	0.0	0.0	4.3
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)