

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: P242672

Luminaire Tested: **S124DR-S1195D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242672
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-S1195D830-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4253.1 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

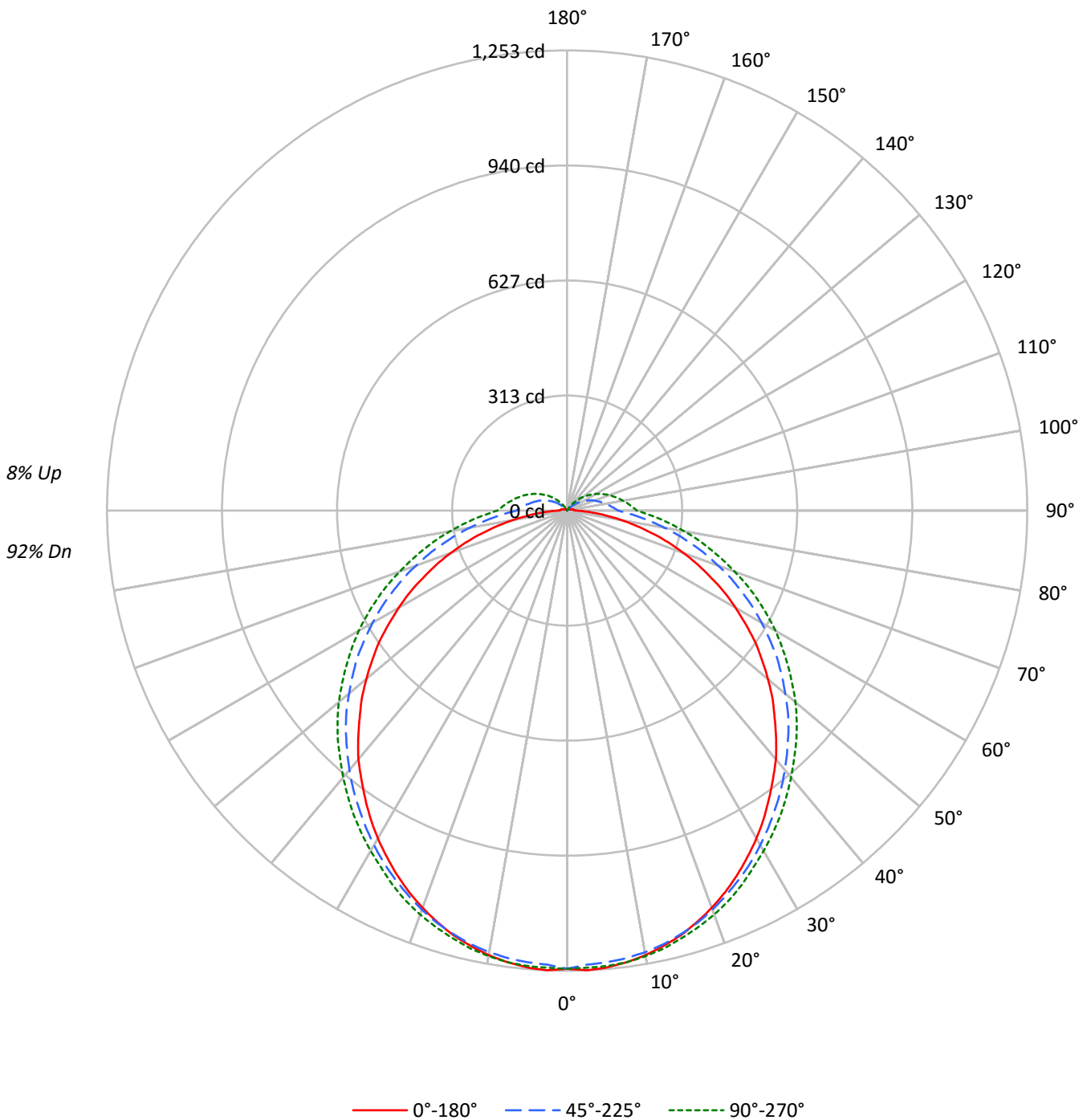
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11088	11088	11088
5°	11122	10826	10853
10°	11054	10638	10622
15°	10954	10422	10354
20°	10804	10185	10094
25°	10635	9922	9809
30°	10451	9660	9517
35°	10245	9392	9261
40°	10079	9136	8994
45°	9833	8898	8762
50°	9624	8627	8517
55°	9409	8368	8231
60°	9074	8041	7968
65°	8706	7687	7645
70°	8262	7285	7270
75°	7640	6840	6925
80°	6949	6402	6575
85°	6058	5993	6334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	2.8
10°-20°	338.7	8.0
20°-30°	512.1	12.0
30°-40°	619.5	14.6
40°-50°	654.9	15.4
50°-60°	616.4	14.5
60°-70°	511.4	12.0
70°-80°	358.9	8.4
80°-90°	202.3	4.8
90°-100°	120.5	2.8
100°-110°	89.2	2.1
110°-120°	59.9	1.4
120°-130°	33.7	0.8
130°-140°	14.6	0.3
140°-150°	2.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	968.9	22.8
0°-40°	1588.4	37.3
0°-60°	2859.6	67.2
0°-90°	3932.3	92.5
90°-120°	269.5	6.3
90°-150°	320.7	7.5
90°-180°	321.0	7.5
0°-180°	4253.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1249	1245	1235	1246	1245	119
15°	1197	1199	1194	1207	1206	337
25°	1095	1104	1108	1123	1124	504
35°	958	975	989	1009	1013	600
45°	799	826	852	876	883	618
55°	626	655	697	725	733	558
65°	433	478	525	560	571	429
75°	240	292	351	390	402	255
85°	74	133	196	238	251	77
90°	22	78	138	179	190	15
95°	18	64	122	159	172	14
105°	13	40	92	127	138	14
115°	8	21	66	96	106	9
125°	6	4	39	66	74	5
135°	3	3	13	35	43	3
145°	1	0	0	8	14	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°	1247.4	1247.4	1247.4	1247.4	1247.4
2.5°	1253.0	1248.8	1237.7	1247.4	1246.1
5°	1248.8	1244.7	1234.9	1246.1	1244.7
7.5°	1240.5	1237.7	1229.3	1241.9	1240.5
10°	1229.3	1227.9	1220.9	1233.5	1232.1
12.5°	1213.9	1213.9	1209.7	1220.9	1220.9
15°	1197.2	1198.6	1194.4	1206.9	1205.5
17.5°	1174.8	1179.0	1177.6	1190.2	1188.8
20°	1151.1	1155.3	1156.6	1170.6	1170.6
22.5°	1124.5	1130.1	1132.9	1146.9	1149.7
25°	1095.2	1103.6	1107.8	1123.1	1124.5
27.5°	1063.1	1075.6	1081.2	1095.2	1096.6
30°	1030.9	1042.1	1051.9	1067.2	1070.0
32.5°	996.0	1010.0	1021.1	1039.3	1042.1
35°	958.3	975.0	989.0	1008.6	1012.8
37.5°	920.6	940.1	956.9	976.4	980.6
40°	884.3	902.4	922.0	942.9	948.5
42.5°	842.3	863.3	887.0	910.8	915.0
45°	799.0	825.6	852.1	875.9	882.9
47.5°	758.5	785.1	815.8	839.5	847.9
50°	713.8	744.6	775.3	803.2	811.6
52.5°	669.1	699.9	736.2	764.1	772.5
55°	625.8	655.2	697.1	725.0	733.4
57.5°	576.9	613.2	653.8	687.3	694.3
60°	529.4	565.8	611.9	644.0	655.2
62.5°	483.3	523.8	569.9	602.1	613.2
65°	433.0	477.7	525.2	560.2	571.3
67.5°	385.5	433.0	483.3	518.3	529.4
70°	336.7	384.2	437.2	475.0	484.7
72.5°	289.2	338.1	395.3	431.6	442.8
75°	240.3	292.0	350.6	389.7	402.3
77.5°	194.2	248.7	310.1	349.2	363.2
80°	152.3	208.1	269.6	311.5	322.7
82.5°	110.4	169.0	230.5	273.8	286.4
85°	74.0	132.7	195.6	237.5	251.4
87.5°	46.1	103.4	164.8	205.3	217.9
90°	22.4	78.2	138.3	178.8	190.0
92.5°	21.0	69.8	129.9	169.0	180.2
95°	18.2	64.3	121.5	159.2	171.8
97.5°	16.8	57.3	114.5	150.9	163.4
100°	15.4	51.7	106.2	143.9	153.7
102.5°	15.4	46.1	99.2	135.5	146.7
105°	12.6	40.5	92.2	127.1	138.3
107.5°	12.6	36.3	85.2	120.1	129.9
110°	11.2	30.7	79.6	111.8	122.9



TEST NUMBER: P242672

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.8	26.5	72.6	103.4	114.5
115°	8.4	21.0	65.7	96.4	106.2
117.5°	8.4	16.8	58.7	88.0	99.2
120°	7.0	11.2	51.7	79.6	90.8
122.5°	7.0	7.0	44.7	72.6	82.4
125°	5.6	4.2	39.1	65.7	74.0
127.5°	5.6	4.2	32.1	57.3	67.1
130°	4.2	2.8	25.1	50.3	58.7
132.5°	4.2	2.8	19.6	43.3	51.7
135°	2.8	2.8	12.6	34.9	43.3
137.5°	2.8	1.4	7.0	27.9	34.9
140°	2.8	1.4	2.8	21.0	27.9
142.5°	1.4	1.4	0.0	15.4	21.0
145°	1.4	0.0	0.0	8.4	14.0
147.5°	1.4	0.0	0.0	1.4	7.0
150°	1.4	0.0	0.0	0.0	0.0
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)