

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: P243556

Luminaire Tested: **S124DR-H1195D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-H1195D940-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4034.6 lumens
Efficiency: N/A
Efficacy: 107.0 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

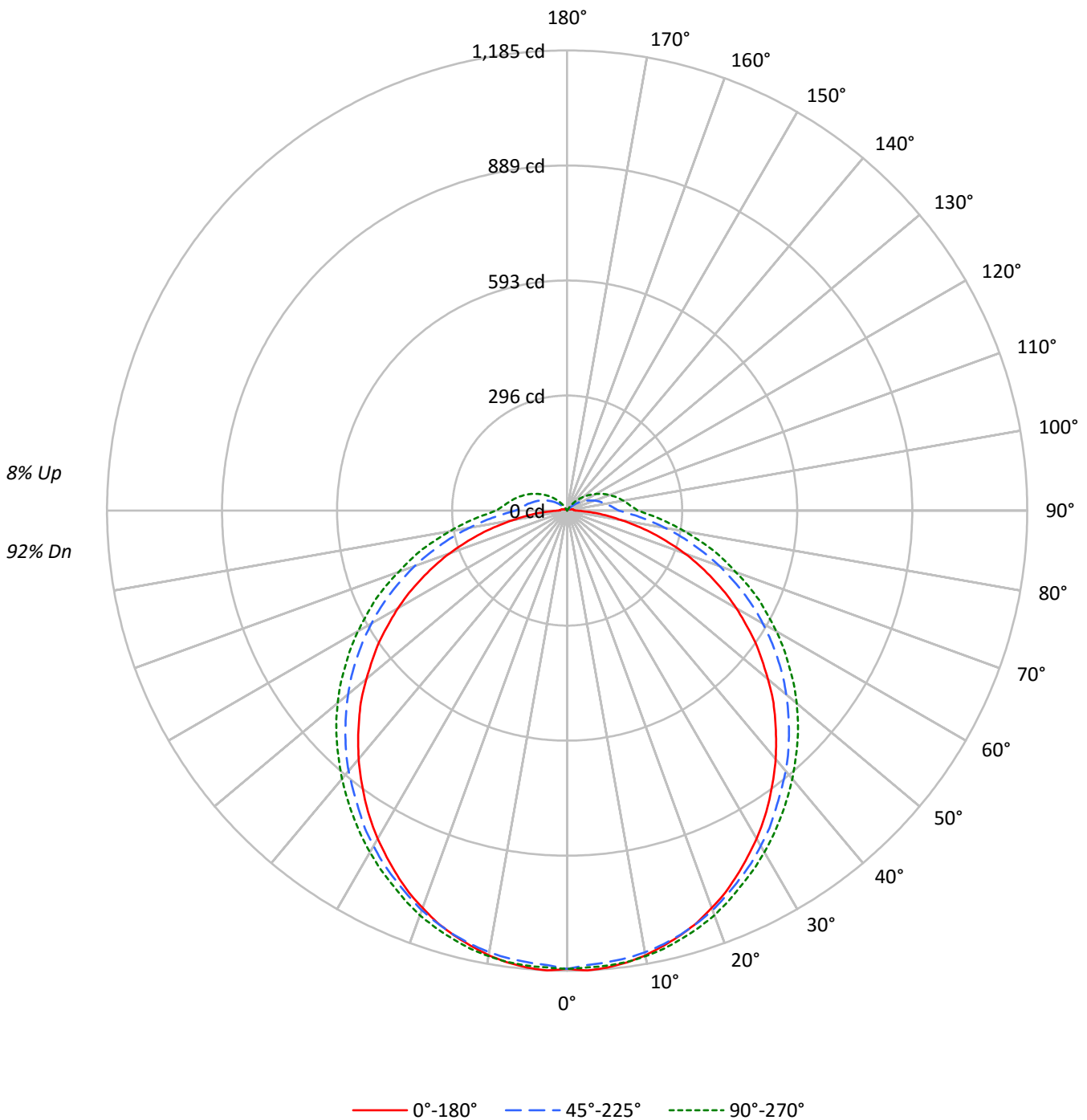
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	86	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	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	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	37	30	25	36	29	25	34	29	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°	10492	10492	10492
5°	10523	10237	10258
10°	10455	10065	10045
15°	10352	9861	9803
20°	10218	9643	9561
25°	10060	9392	9278
30°	9893	9158	9037
35°	9708	8898	8786
40°	9522	8676	8551
45°	9323	8436	8328
50°	9098	8193	8095
55°	8901	7935	7827
60°	8621	7648	7565
65°	8298	7326	7301
70°	7912	6960	6924
75°	7296	6508	6650
80°	6465	6077	6261
85°	5853	5726	6037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	2.8
10°-20°	320.4	7.9
20°-30°	485.0	12.0
30°-40°	587.3	14.6
40°-50°	621.2	15.4
50°-60°	585.2	14.5
60°-70°	486.3	12.1
70°-80°	341.8	8.5
80°-90°	192.5	4.8
90°-100°	114.3	2.8
100°-110°	84.6	2.1
110°-120°	56.4	1.4
120°-130°	31.8	0.8
130°-140°	13.6	0.3
140°-150°	2.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	917.1	22.7
0°-40°	1504.4	37.3
0°-60°	2710.7	67.2
0°-90°	3731.3	92.5
90°-120°	255.2	6.3
90°-150°	303.3	7.5
90°-180°	303.0	7.5
0°-180°	4034.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1180	1180	1180	1180	1180	
5°	1182	1176	1168	1178	1176	112
15°	1131	1134	1130	1143	1141	319
25°	1036	1045	1049	1064	1064	477
35°	908	923	937	957	961	568
45°	758	781	808	832	839	585
55°	592	623	661	690	697	528
65°	413	454	500	532	546	409
75°	230	278	334	371	386	243
85°	72	127	187	227	240	74
90°	21	74	133	169	182	14
95°	18	60	115	152	162	14
105°	12	39	88	120	132	13
115°	9	20	62	90	102	8
125°	5	4	36	62	70	5
135°	2	2	11	33	40	2
145°	1	0	0	8	12	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°	1180.3	1180.3	1180.3	1180.3	1180.3
2.5°	1185.3	1181.5	1171.5	1179.0	1177.8
5°	1181.5	1176.5	1167.7	1177.8	1176.5
7.5°	1174.0	1170.3	1162.7	1174.0	1172.8
10°	1162.7	1160.2	1155.2	1165.2	1165.2
12.5°	1147.7	1147.7	1143.9	1155.2	1155.2
15°	1131.4	1133.9	1130.1	1142.7	1141.4
17.5°	1112.6	1115.1	1113.8	1126.4	1126.4
20°	1088.7	1092.5	1095.0	1108.8	1108.8
22.5°	1064.9	1069.9	1072.4	1087.5	1087.5
25°	1036.0	1044.8	1048.6	1063.6	1063.6
27.5°	1005.9	1017.2	1024.8	1038.6	1041.1
30°	975.8	988.4	997.2	1012.2	1016.0
32.5°	943.2	955.8	969.6	984.6	989.6
35°	908.1	923.2	937.0	957.0	960.8
37.5°	871.7	889.3	905.6	926.9	931.9
40°	835.4	856.7	875.5	895.6	901.8
42.5°	796.5	817.8	842.9	864.2	870.5
45°	757.6	781.4	807.8	831.6	839.1
47.5°	718.7	743.8	772.6	797.7	806.5
50°	674.8	702.4	736.3	761.4	771.4
52.5°	632.2	662.3	699.9	725.0	736.3
55°	592.0	623.4	661.0	689.9	697.4
57.5°	545.6	580.7	622.1	653.5	661.0
60°	503.0	538.1	582.0	613.4	622.1
62.5°	459.1	496.7	541.9	573.2	582.0
65°	412.7	454.1	500.5	531.8	545.6
67.5°	367.5	408.9	457.8	492.9	504.2
70°	322.4	365.0	417.7	452.8	461.6
72.5°	274.7	321.1	375.0	411.4	424.0
75°	229.5	278.5	333.6	371.3	386.3
77.5°	185.6	237.1	294.8	333.6	343.7
80°	141.7	198.2	255.9	294.8	307.3
82.5°	106.6	159.3	219.5	260.9	270.9
85°	71.5	126.7	186.9	227.0	239.6
87.5°	42.6	99.1	156.8	194.4	207.0
90°	21.3	74.0	133.0	169.3	181.9
92.5°	18.8	66.5	122.9	159.3	171.8
95°	17.6	60.2	115.4	151.8	161.8
97.5°	16.3	55.2	107.9	143.0	154.3
100°	15.1	48.9	101.6	135.5	146.8
102.5°	13.8	43.9	94.1	127.9	139.2
105°	12.5	38.9	87.8	120.4	131.7
107.5°	11.3	33.9	81.5	112.9	124.2
110°	10.0	28.8	75.3	105.4	116.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.8	25.1	67.7	97.8	109.1
115°	8.8	20.1	61.5	90.3	101.6
117.5°	7.5	15.1	55.2	82.8	92.8
120°	7.5	11.3	48.9	75.3	85.3
122.5°	6.3	7.5	42.6	69.0	77.8
125°	5.0	3.8	36.4	61.5	70.2
127.5°	5.0	3.8	30.1	53.9	62.7
130°	3.8	3.8	23.8	46.4	55.2
132.5°	3.8	2.5	17.6	40.1	47.7
135°	2.5	2.5	11.3	32.6	40.1
137.5°	2.5	1.3	7.5	26.3	33.9
140°	2.5	1.3	2.5	20.1	26.3
142.5°	1.3	1.3	0.0	13.8	18.8
145°	1.3	0.0	0.0	7.5	12.5
147.5°	1.3	0.0	0.0	1.3	6.3
150°	0.0	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)