

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: P242691

Luminaire Tested: **S124DR-S1195D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242691  
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-S1195D935-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3885.1 lumens  
Efficiency: N/A  
Efficacy: 94.5 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

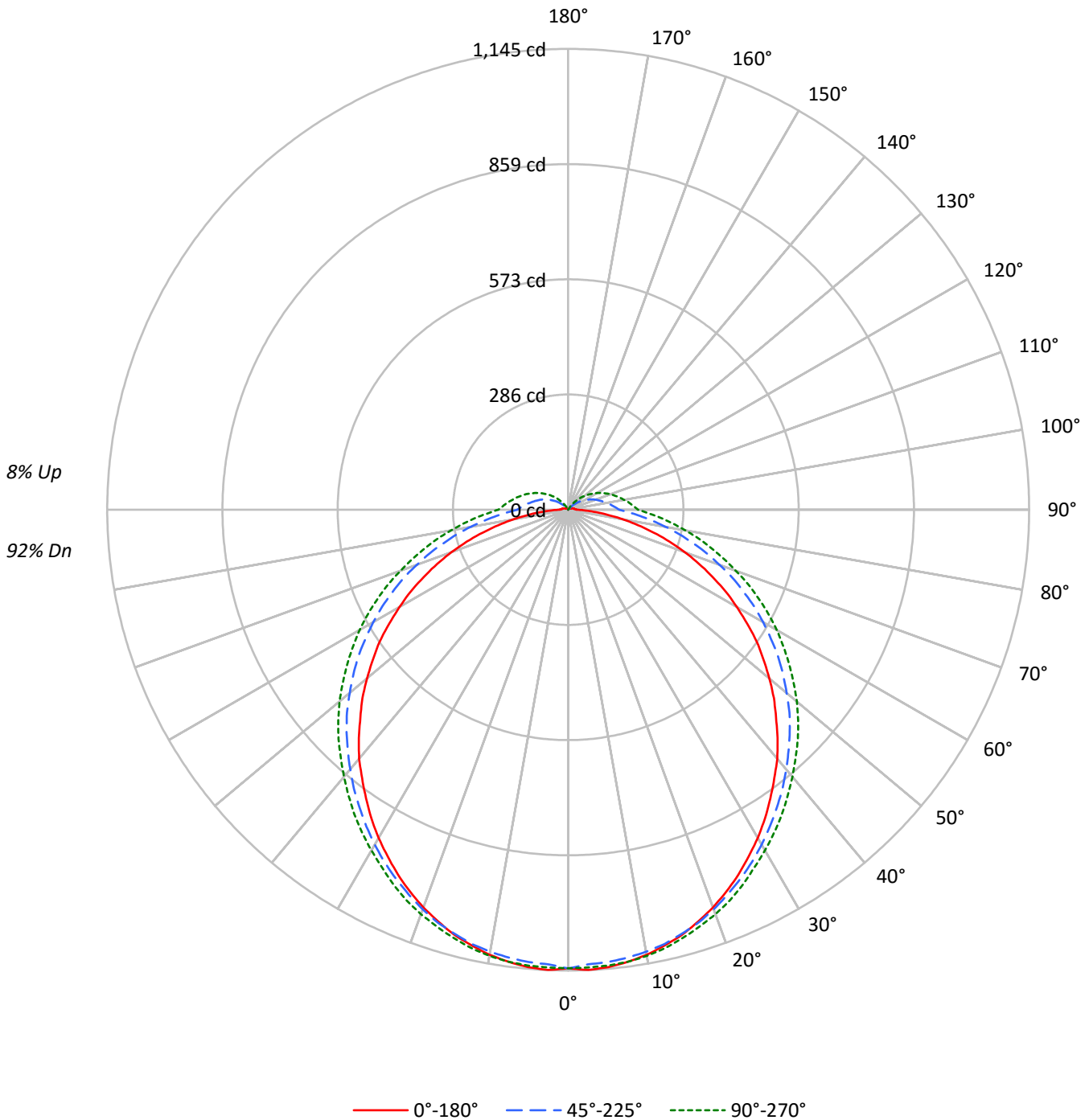
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	10129	10129	10129
5°	10160	9889	9914
10°	10097	9718	9703
15°	10006	9520	9458
20°	9869	9305	9220
25°	9714	9063	8960
30°	9547	8825	8695
35°	9358	8580	8459
40°	9207	8346	8215
45°	8982	8129	8004
50°	8792	7880	7780
55°	8596	7644	7518
60°	8289	7344	7278
65°	7954	7023	6984
70°	7546	6655	6642
75°	6978	6249	6326
80°	6346	5849	6007
85°	5534	5472	5787



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.0	2.8
10°-20°	309.4	8.0
20°-30°	467.8	12.0
30°-40°	565.9	14.6
40°-50°	598.2	15.4
50°-60°	563.0	14.5
60°-70°	467.2	12.0
70°-80°	327.9	8.4
80°-90°	184.8	4.8
90°-100°	110.0	2.8
100°-110°	81.5	2.1
110°-120°	54.7	1.4
120°-130°	30.8	0.8
130°-140°	13.3	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°	885.1	22.8
0°-40°	1451.0	37.3
0°-60°	2612.2	67.2
0°-90°	3592.1	92.5
90°-120°	246.2	6.3
90°-150°	293.0	7.5
90°-180°	293.0	7.5
0°-180°	3885.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1141	1137	1128	1138	1137	108
15°	1094	1095	1091	1102	1101	308
25°	1000	1008	1012	1026	1027	461
35°	875	891	904	921	925	548
45°	730	754	778	800	806	564
55°	572	598	637	662	670	509
65°	396	436	480	512	522	392
75°	220	267	320	356	368	233
85°	68	121	179	217	230	70
90°	20	72	126	163	174	14
95°	17	59	111	146	157	13
105°	12	37	84	116	126	13
115°	8	19	60	88	97	8
125°	5	4	36	60	68	5
135°	3	3	12	32	40	2
145°	1	0	0	8	13	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°	1139.5	1139.5	1139.5	1139.5	1139.5
2.5°	1144.6	1140.8	1130.6	1139.5	1138.3
5°	1140.8	1137.0	1128.0	1138.3	1137.0
7.5°	1133.1	1130.6	1122.9	1134.4	1133.1
10°	1122.9	1121.7	1115.3	1126.8	1125.5
12.5°	1108.9	1108.9	1105.1	1115.3	1115.3
15°	1093.6	1094.9	1091.0	1102.5	1101.2
17.5°	1073.2	1077.0	1075.7	1087.2	1085.9
20°	1051.5	1055.3	1056.6	1069.3	1069.3
22.5°	1027.2	1032.3	1034.9	1047.7	1050.2
25°	1000.4	1008.1	1011.9	1026.0	1027.2
27.5°	971.1	982.6	987.7	1000.4	1001.7
30°	941.7	951.9	960.9	974.9	977.5
32.5°	909.8	922.6	932.8	949.4	951.9
35°	875.4	890.7	903.5	921.3	925.1
37.5°	840.9	858.8	874.1	892.0	895.8
40°	807.8	824.3	842.2	861.3	866.4
42.5°	769.5	788.6	810.3	832.0	835.8
45°	729.9	754.2	778.4	800.1	806.5
47.5°	692.9	717.1	745.2	766.9	774.6
50°	652.1	680.1	708.2	733.7	741.4
52.5°	611.2	639.3	672.5	698.0	705.7
55°	571.7	598.5	636.8	662.3	669.9
57.5°	527.0	560.2	597.2	627.8	634.2
60°	483.6	516.8	558.9	588.3	598.5
62.5°	441.5	478.5	520.6	550.0	560.2
65°	395.6	436.4	479.8	511.7	521.9
67.5°	352.2	395.6	441.5	473.4	483.6
70°	307.5	350.9	399.4	433.9	442.8
72.5°	264.1	308.8	361.1	394.3	404.5
75°	219.5	266.7	320.3	356.0	367.5
77.5°	177.4	227.1	283.3	319.0	331.8
80°	139.1	190.1	246.3	284.6	294.8
82.5°	100.8	154.4	210.6	250.1	261.6
85°	67.6	121.2	178.6	216.9	229.7
87.5°	42.1	94.4	150.6	187.6	199.1
90°	20.4	71.5	126.3	163.3	173.5
92.5°	19.1	63.8	118.7	154.4	164.6
95°	16.6	58.7	111.0	145.5	157.0
97.5°	15.3	52.3	104.6	137.8	149.3
100°	14.0	47.2	97.0	131.4	140.4
102.5°	14.0	42.1	90.6	123.8	134.0
105°	11.5	37.0	84.2	116.1	126.3
107.5°	11.5	33.2	77.8	109.7	118.7
110°	10.2	28.1	72.7	102.1	112.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.9	24.2	66.4	94.4	104.6
115°	7.7	19.1	60.0	88.0	97.0
117.5°	7.7	15.3	53.6	80.4	90.6
120°	6.4	10.2	47.2	72.7	82.9
122.5°	6.4	6.4	40.8	66.4	75.3
125°	5.1	3.8	35.7	60.0	67.6
127.5°	5.1	3.8	29.3	52.3	61.3
130°	3.8	2.6	23.0	45.9	53.6
132.5°	3.8	2.6	17.9	39.6	47.2
135°	2.6	2.6	11.5	31.9	39.6
137.5°	2.6	1.3	6.4	25.5	31.9
140°	2.6	1.3	2.6	19.1	25.5
142.5°	1.3	1.3	0.0	14.0	19.1
145°	1.3	0.0	0.0	7.7	12.8
147.5°	1.3	0.0	0.0	1.3	6.4
150°	1.3	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)