

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: P242696

Luminaire Tested: **S124DR-S1195D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242696  
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-S1195D940-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4023.7 lumens  
Efficiency: N/A  
Efficacy: 97.9 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

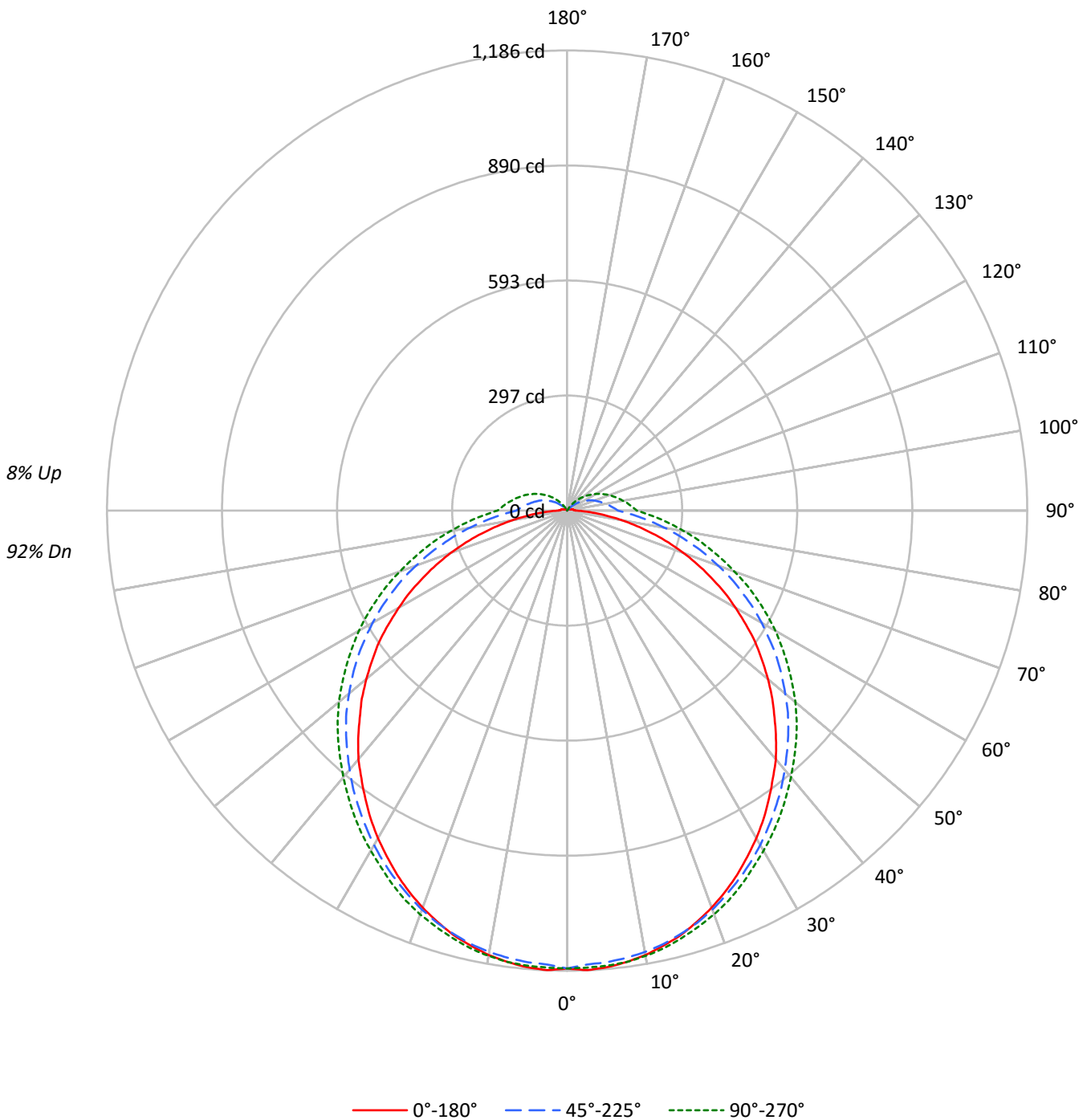
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	10491	10491	10491
5°	10523	10242	10267
10°	10458	10064	10048
15°	10363	9860	9796
20°	10221	9637	9549
25°	10061	9387	9281
30°	9888	9140	9004
35°	9692	8886	8761
40°	9536	8643	8509
45°	9302	8419	8289
50°	9105	8161	8057
55°	8903	7917	7787
60°	8585	7607	7537
65°	8237	7273	7232
70°	7816	6893	6879
75°	7226	6471	6551
80°	6575	6058	6221
85°	5731	5668	5994



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.8	2.8
10°-20°	320.4	8.0
20°-30°	484.4	12.0
30°-40°	586.1	14.6
40°-50°	619.6	15.4
50°-60°	583.1	14.5
60°-70°	483.9	12.0
70°-80°	339.5	8.4
80°-90°	191.4	4.8
90°-100°	114.0	2.8
100°-110°	84.4	2.1
110°-120°	56.6	1.4
120°-130°	31.9	0.8
130°-140°	13.8	0.3
140°-150°	2.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	916.7	22.8
0°-40°	1502.7	37.3
0°-60°	2705.4	67.2
0°-90°	3720.3	92.5
90°-120°	255.0	6.3
90°-150°	303.4	7.5
90°-180°	303.0	7.5
0°-180°	4023.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1180	1180	1180	1180	1180	
5°	1182	1178	1168	1179	1178	112
15°	1133	1134	1130	1142	1140	319
25°	1036	1044	1048	1063	1064	477
35°	907	922	936	954	958	568
45°	756	781	806	829	835	584
55°	592	620	660	686	694	528
65°	410	452	497	530	540	406
75°	227	276	332	369	381	242
85°	70	126	185	225	238	73
90°	21	74	131	169	180	14
95°	17	61	115	151	163	14
105°	12	38	87	120	131	13
115°	8	20	62	91	100	8
125°	5	4	37	62	70	5
135°	3	3	12	33	41	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°	1180.2	1180.2	1180.2	1180.2	1180.2
2.5°	1185.5	1181.5	1170.9	1180.2	1178.9
5°	1181.5	1177.5	1168.3	1178.9	1177.5
7.5°	1173.6	1170.9	1163.0	1174.9	1173.6
10°	1163.0	1161.7	1155.1	1167.0	1165.6
12.5°	1148.5	1148.5	1144.5	1155.1	1155.1
15°	1132.6	1133.9	1130.0	1141.8	1140.5
17.5°	1111.5	1115.4	1114.1	1126.0	1124.7
20°	1089.0	1092.9	1094.3	1107.5	1107.5
22.5°	1063.9	1069.2	1071.8	1085.0	1087.7
25°	1036.1	1044.1	1048.0	1062.6	1063.9
27.5°	1005.7	1017.6	1022.9	1036.1	1037.4
30°	975.3	985.9	995.2	1009.7	1012.3
32.5°	942.3	955.5	966.1	983.3	985.9
35°	906.6	922.5	935.7	954.2	958.1
37.5°	870.9	889.4	905.3	923.8	927.8
40°	836.6	853.7	872.2	892.1	897.4
42.5°	796.9	816.7	839.2	861.7	865.6
45°	755.9	781.1	806.2	828.6	835.2
47.5°	717.6	742.7	771.8	794.3	802.2
50°	675.3	704.4	733.5	759.9	767.8
52.5°	633.0	662.1	696.5	722.9	730.8
55°	592.1	619.8	659.5	685.9	693.8
57.5°	545.8	580.2	618.5	650.2	656.8
60°	500.9	535.2	578.9	609.2	619.8
62.5°	457.3	495.6	539.2	569.6	580.2
65°	409.7	452.0	496.9	530.0	540.5
67.5°	364.8	409.7	457.3	490.3	500.9
70°	318.5	363.4	413.7	449.3	458.6
72.5°	273.6	319.8	374.0	408.4	418.9
75°	227.3	276.2	331.7	368.7	380.6
77.5°	183.7	235.2	293.4	330.4	343.6
80°	144.1	196.9	255.1	294.7	305.3
82.5°	104.4	159.9	218.1	259.0	270.9
85°	70.0	125.6	185.0	224.7	237.9
87.5°	43.6	97.8	155.9	194.3	206.2
90°	21.1	74.0	130.8	169.2	179.7
92.5°	19.8	66.1	122.9	159.9	170.5
95°	17.2	60.8	115.0	150.7	162.6
97.5°	15.9	54.2	108.4	142.7	154.6
100°	14.5	48.9	100.4	136.1	145.4
102.5°	14.5	43.6	93.8	128.2	138.8
105°	11.9	38.3	87.2	120.3	130.8
107.5°	11.9	34.4	80.6	113.7	122.9
110°	10.6	29.1	75.3	105.7	116.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	9.3	25.1	68.7	97.8	108.4
115°	7.9	19.8	62.1	91.2	100.4
117.5°	7.9	15.9	55.5	83.3	93.8
120°	6.6	10.6	48.9	75.3	85.9
122.5°	6.6	6.6	42.3	68.7	78.0
125°	5.3	4.0	37.0	62.1	70.0
127.5°	5.3	4.0	30.4	54.2	63.4
130°	4.0	2.6	23.8	47.6	55.5
132.5°	4.0	2.6	18.5	41.0	48.9
135°	2.6	2.6	11.9	33.0	41.0
137.5°	2.6	1.3	6.6	26.4	33.0
140°	2.6	1.3	2.6	19.8	26.4
142.5°	1.3	1.3	0.0	14.5	19.8
145°	1.3	0.0	0.0	7.9	13.2
147.5°	1.3	0.0	0.0	1.3	6.6
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)