

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: P243541

Luminaire Tested: **S124DR-H1195D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243541
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-H1195D840-X4F0-XX-UDD-D-W
Description: DEFINE 4 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: 4569.1 lumens
Efficiency: N/A
Efficacy: 121.2 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

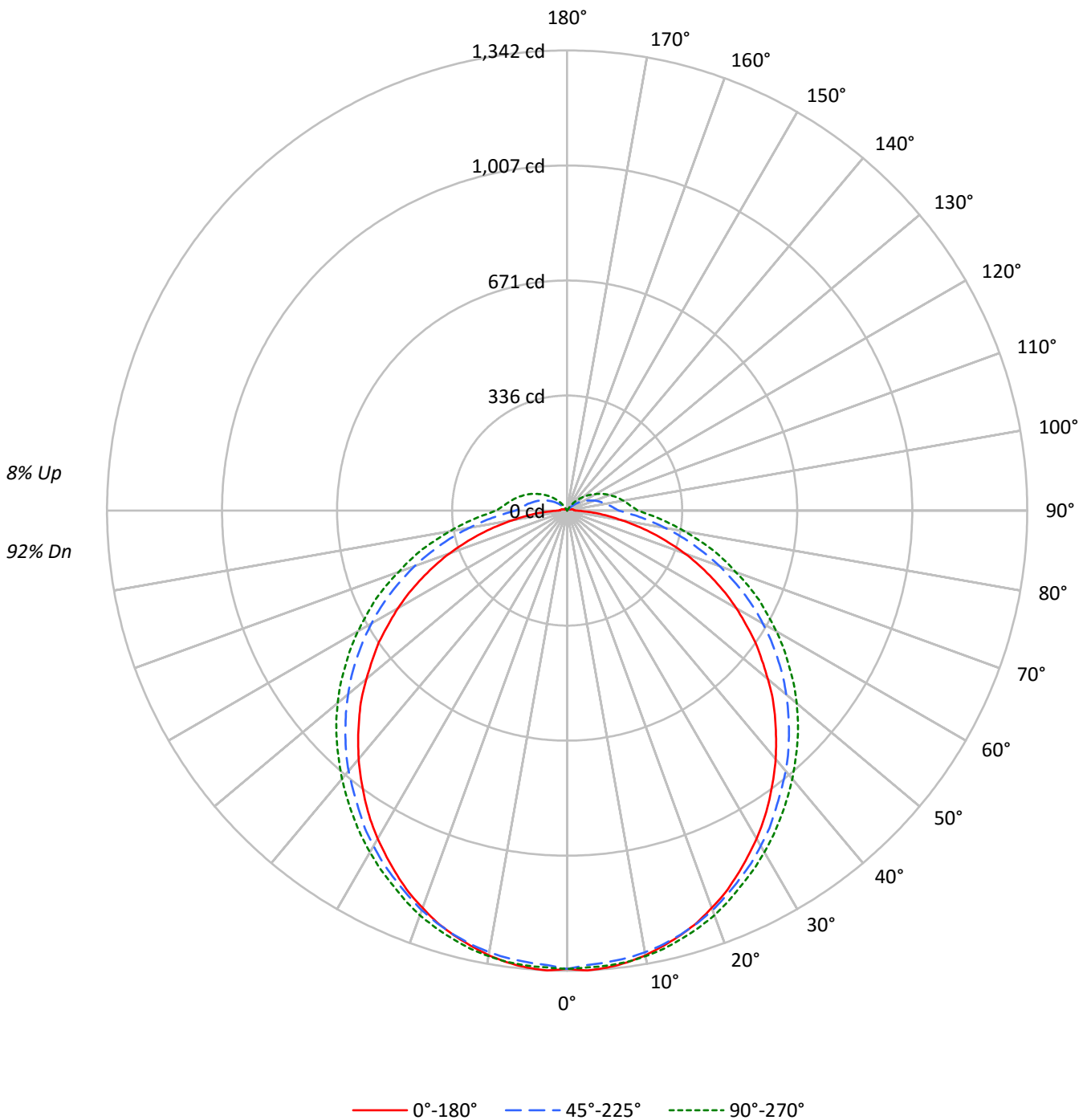
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243541

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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°	11882	11882	11882
5°	11917	11594	11618
10°	11841	11399	11376
15°	11724	11168	11102
20°	11573	10921	10827
25°	11393	10636	10508
30°	11204	10371	10234
35°	10994	10077	9950
40°	10782	9825	9684
45°	10559	9553	9431
50°	10304	9277	9167
55°	10081	8986	8864
60°	9763	8661	8569
65°	9395	8296	8268
70°	8959	7881	7840
75°	8266	7372	7531
80°	7323	6882	7091
85°	6631	6486	6836



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.6	2.8
10°-20°	362.9	7.9
20°-30°	549.2	12.0
30°-40°	665.1	14.6
40°-50°	703.5	15.4
50°-60°	662.7	14.5
60°-70°	550.7	12.1
70°-80°	387.1	8.5
80°-90°	218.0	4.8
90°-100°	129.4	2.8
100°-110°	95.8	2.1
110°-120°	63.9	1.4
120°-130°	36.1	0.8
130°-140°	15.4	0.3
140°-150°	3.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1038.7	22.7
0°-40°	1703.7	37.3
0°-60°	3069.9	67.2
0°-90°	4225.7	92.5
90°-120°	289.0	6.3
90°-150°	343.5	7.5
90°-180°	343.0	7.5
0°-180°	4569.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1337	1337	1337	1337	1337	
5°	1338	1332	1322	1334	1332	127
15°	1281	1284	1280	1294	1293	361
25°	1173	1183	1188	1205	1205	541
35°	1028	1046	1061	1084	1088	643
45°	858	885	915	942	950	662
55°	670	706	749	781	790	597
65°	467	514	567	602	618	463
75°	260	315	378	420	438	275
85°	81	144	212	257	271	83
90°	24	84	151	192	206	16
95°	20	68	131	172	183	16
105°	14	44	99	136	149	15
115°	10	23	70	102	115	10
125°	6	4	41	70	80	6
135°	3	3	13	37	46	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



TEST NUMBER: P243541

CATALOG NUMBER: S124DR-H1195D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1336.7	1336.7	1336.7	1336.7	1336.7
2.5°	1342.4	1338.1	1326.7	1335.3	1333.8
5°	1338.1	1332.4	1322.5	1333.8	1332.4
7.5°	1329.6	1325.3	1316.8	1329.6	1328.2
10°	1316.8	1314.0	1308.3	1319.6	1319.6
12.5°	1299.8	1299.8	1295.5	1308.3	1308.3
15°	1281.3	1284.1	1279.9	1294.1	1292.6
17.5°	1260.0	1262.8	1261.4	1275.6	1275.6
20°	1233.0	1237.2	1240.1	1255.7	1255.7
22.5°	1206.0	1211.7	1214.5	1231.6	1231.6
25°	1173.3	1183.3	1187.5	1204.6	1204.6
27.5°	1139.2	1152.0	1160.5	1176.2	1179.0
30°	1105.1	1119.3	1129.3	1146.3	1150.6
32.5°	1068.2	1082.4	1098.0	1115.1	1120.8
35°	1028.4	1045.5	1061.1	1083.8	1088.1
37.5°	987.2	1007.1	1025.6	1049.7	1055.4
40°	946.0	970.2	991.5	1014.2	1021.3
42.5°	902.0	926.2	954.6	978.7	985.8
45°	858.0	885.0	914.8	941.8	950.3
47.5°	813.9	842.4	875.0	903.4	913.4
50°	764.2	795.5	833.8	862.2	873.6
52.5°	715.9	750.0	792.6	821.0	833.8
55°	670.5	706.0	748.6	781.3	789.8
57.5°	617.9	657.7	704.6	740.1	748.6
60°	569.6	609.4	659.1	694.6	704.6
62.5°	519.9	562.5	613.7	649.2	659.1
65°	467.3	514.2	566.8	602.3	617.9
67.5°	416.2	463.1	518.5	558.3	571.0
70°	365.1	413.4	473.0	512.8	522.7
72.5°	311.1	363.6	424.7	465.9	480.1
75°	260.0	315.3	377.9	420.5	437.5
77.5°	210.2	268.5	333.8	377.9	389.2
80°	160.5	224.4	289.8	333.8	348.0
82.5°	120.7	180.4	248.6	295.5	306.8
85°	81.0	143.5	211.7	257.1	271.3
87.5°	48.3	112.2	177.6	220.2	234.4
90°	24.1	83.8	150.6	191.8	206.0
92.5°	21.3	75.3	139.2	180.4	194.6
95°	19.9	68.2	130.7	171.9	183.2
97.5°	18.5	62.5	122.2	161.9	174.7
100°	17.0	55.4	115.1	153.4	166.2
102.5°	15.6	49.7	106.5	144.9	157.7
105°	14.2	44.0	99.4	136.4	149.2
107.5°	12.8	38.4	92.3	127.8	140.6
110°	11.4	32.7	85.2	119.3	132.1



TEST NUMBER: P243541

CATALOG NUMBER: S124DR-H1195D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.9	28.4	76.7	110.8	123.6
115°	9.9	22.7	69.6	102.3	115.1
117.5°	8.5	17.0	62.5	93.8	105.1
120°	8.5	12.8	55.4	85.2	96.6
122.5°	7.1	8.5	48.3	78.1	88.1
125°	5.7	4.3	41.2	69.6	79.5
127.5°	5.7	4.3	34.1	61.1	71.0
130°	4.3	4.3	27.0	52.6	62.5
132.5°	4.3	2.8	19.9	45.5	54.0
135°	2.8	2.8	12.8	36.9	45.5
137.5°	2.8	1.4	8.5	29.8	38.4
140°	2.8	1.4	2.8	22.7	29.8
142.5°	1.4	1.4	0.0	15.6	21.3
145°	1.4	0.0	0.0	8.5	14.2
147.5°	1.4	0.0	0.0	1.4	7.1
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)