

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: P242681

Luminaire Tested: **S124DR-S1195D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242681
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-S1195D840-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4556.9 lumens
Efficiency: N/A
Efficacy: 110.9 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

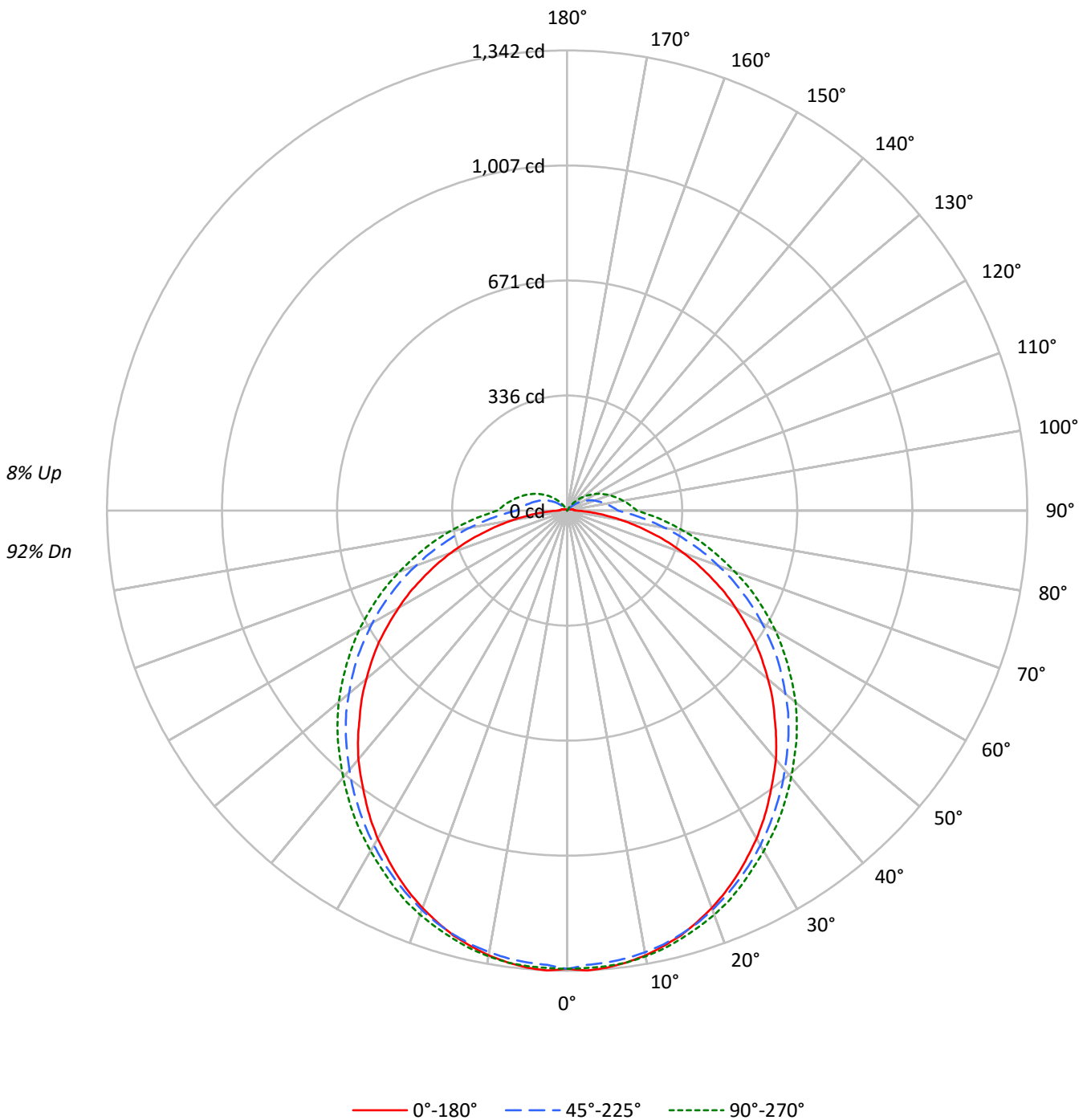
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11881	11881	11881
5°	11916	11599	11628
10°	11843	11397	11380
15°	11736	11167	11093
20°	11576	10914	10814
25°	11394	10631	10510
30°	11199	10350	10198
35°	10976	10063	9922
40°	10798	9788	9637
45°	10535	9534	9388
50°	10312	9243	9125
55°	10081	8966	8819
60°	9721	8615	8537
65°	9329	8238	8191
70°	8851	7806	7791
75°	8183	7329	7419
80°	7441	6861	7044
85°	6492	6418	6788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.6	2.8
10°-20°	362.8	8.0
20°-30°	548.6	12.0
30°-40°	663.7	14.6
40°-50°	701.7	15.4
50°-60°	660.4	14.5
60°-70°	548.0	12.0
70°-80°	384.6	8.4
80°-90°	216.8	4.8
90°-100°	129.1	2.8
100°-110°	95.6	2.1
110°-120°	64.1	1.4
120°-130°	36.1	0.8
130°-140°	15.6	0.3
140°-150°	3.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1038.1	22.8
0°-40°	1701.8	37.3
0°-60°	3063.9	67.2
0°-90°	4213.3	92.5
90°-120°	288.8	6.3
90°-150°	343.6	7.5
90°-180°	344.0	7.5
0°-180°	4556.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1337	1337	1337	1337	1337	
5°	1338	1334	1323	1335	1334	127
15°	1283	1284	1280	1293	1292	361
25°	1173	1182	1187	1203	1205	541
35°	1027	1045	1060	1081	1085	643
45°	856	884	913	938	946	662
55°	670	702	747	777	786	597
65°	464	512	563	600	612	460
75°	257	313	376	418	431	274
85°	79	142	210	254	269	83
90°	24	84	148	192	204	16
95°	20	69	130	171	184	16
105°	14	43	99	136	148	15
115°	9	22	70	103	114	10
125°	6	4	42	70	79	6
135°	3	3	14	37	46	3
145°	2	0	0	9	15	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°	1336.6	1336.6	1336.6	1336.6	1336.6
2.5°	1342.5	1338.0	1326.1	1336.6	1335.1
5°	1338.0	1333.6	1323.1	1335.1	1333.6
7.5°	1329.1	1326.1	1317.1	1330.6	1329.1
10°	1317.1	1315.6	1308.1	1321.6	1320.1
12.5°	1300.6	1300.6	1296.1	1308.1	1308.1
15°	1282.7	1284.2	1279.7	1293.1	1291.6
17.5°	1258.7	1263.2	1261.7	1275.2	1273.7
20°	1233.3	1237.8	1239.3	1254.2	1254.2
22.5°	1204.8	1210.8	1213.8	1228.8	1231.8
25°	1173.4	1182.4	1186.9	1203.3	1204.8
27.5°	1139.0	1152.5	1158.4	1173.4	1174.9
30°	1104.6	1116.5	1127.0	1143.5	1146.5
32.5°	1067.1	1082.1	1094.1	1113.5	1116.5
35°	1026.7	1044.7	1059.7	1080.6	1085.1
37.5°	986.3	1007.3	1025.2	1046.2	1050.7
40°	947.4	966.9	987.8	1010.3	1016.3
42.5°	902.5	925.0	950.4	975.8	980.3
45°	856.1	884.5	913.0	938.4	945.9
47.5°	812.7	841.1	874.1	899.5	908.5
50°	764.8	797.7	830.7	860.6	869.6
52.5°	716.9	749.8	788.8	818.7	827.7
55°	670.5	702.0	746.9	776.8	785.8
57.5°	618.1	657.0	700.5	736.4	743.9
60°	567.2	606.2	655.6	690.0	702.0
62.5°	517.9	561.3	610.7	645.1	657.0
65°	464.0	511.9	562.8	600.2	612.1
67.5°	413.1	464.0	517.9	555.3	567.2
70°	360.7	411.6	468.5	508.9	519.4
72.5°	309.8	362.2	423.6	462.5	474.5
75°	257.4	312.8	375.7	417.6	431.0
77.5°	208.0	266.4	332.3	374.2	389.1
80°	163.1	223.0	288.9	333.8	345.7
82.5°	118.2	181.1	247.0	293.4	306.8
85°	79.3	142.2	209.5	254.4	269.4
87.5°	49.4	110.8	176.6	220.0	233.5
90°	23.9	83.8	148.2	191.6	203.6
92.5°	22.5	74.8	139.2	181.1	193.1
95°	19.5	68.8	130.2	170.6	184.1
97.5°	18.0	61.4	122.7	161.6	175.1
100°	16.5	55.4	113.7	154.2	164.6
102.5°	16.5	49.4	106.3	145.2	157.2
105°	13.5	43.4	98.8	136.2	148.2
107.5°	13.5	38.9	91.3	128.7	139.2
110°	12.0	32.9	85.3	119.7	131.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	10.5	28.4	77.8	110.8	122.7
115°	9.0	22.5	70.3	103.3	113.7
117.5°	9.0	18.0	62.9	94.3	106.3
120°	7.5	12.0	55.4	85.3	97.3
122.5°	7.5	7.5	47.9	77.8	88.3
125°	6.0	4.5	41.9	70.3	79.3
127.5°	6.0	4.5	34.4	61.4	71.8
130°	4.5	3.0	26.9	53.9	62.9
132.5°	4.5	3.0	21.0	46.4	55.4
135°	3.0	3.0	13.5	37.4	46.4
137.5°	3.0	1.5	7.5	29.9	37.4
140°	3.0	1.5	3.0	22.5	29.9
142.5°	1.5	1.5	0.0	16.5	22.5
145°	1.5	0.0	0.0	9.0	15.0
147.5°	1.5	0.0	0.0	1.5	7.5
150°	1.5	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)