

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243712

Luminaire Tested: S125DRP-H1090D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-56)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-H1090D840-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

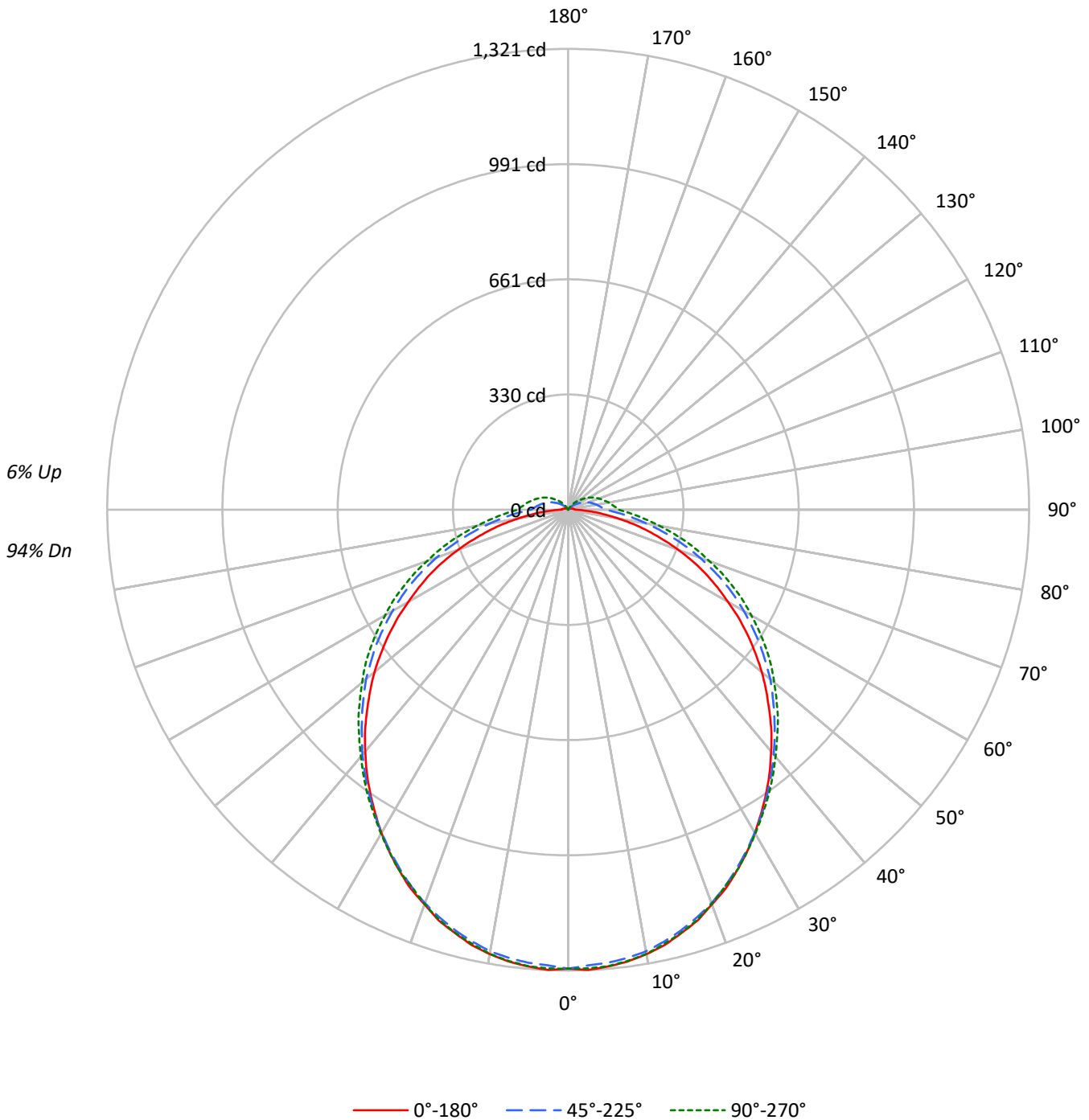
Lumens per Lamp: N/A
Luminaire Lumens: 4085.2 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 31.5
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: 24 FT

TEST NUMBER: P243712

CATALOG NUMBER: S125DRP-H1090D840-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot





TEST NUMBER: P243712

CATALOG NUMBER: S125DRP-H1090D840-X4F0-XX-UDD-D-W

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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	78	73	81	75	70	76	72	68	72	69	65	63
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	60	51	44	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9351	9351	9351
5°	9361	9167	9198
10°	9302	9012	8991
15°	9190	8798	8735
20°	9034	8561	8441
25°	8875	8285	8153
30°	8674	8004	7837
35°	8461	7732	7555
40°	8245	7466	7273
45°	8016	7202	7042
50°	7813	6982	6797
55°	7558	6711	6572
60°	7250	6417	6287
65°	6998	6108	6006
70°	6585	5727	5641
75°	6027	5279	5319
80°	5366	4795	4912
85°	4778	4484	4674

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8016 cd/sqm



TEST NUMBER: P243712

CATALOG NUMBER: S125DRP-H1090D840-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.0
10°-20°	353.7	8.7
20°-30°	526.5	12.9
30°-40°	623.8	15.3
40°-50°	645.4	15.8
50°-60°	595.3	14.6
60°-70°	481.1	11.8
70°-80°	321.5	7.9
80°-90°	165.8	4.1
90°-100°	93.0	2.3
100°-110°	69.0	1.7
110°-120°	45.9	1.1
120°-130°	25.7	0.6
130°-140°	11.5	0.3
140°-150°	2.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1004.7	24.6
0°-40°	1628.5	39.9
0°-60°	2869.2	70.2
0°-90°	3837.6	93.9
90°-120°	207.9	5.1
90°-150°	247.6	6.1
90°-180°	248.0	6.1
0°-180°	4085.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1316	1316	1316	1316	1316	
5°	1314	1313	1304	1313	1313	125
15°	1256	1260	1249	1256	1255	354
25°	1143	1148	1138	1144	1143	526
35°	990	997	995	1000	1001	619
45°	815	828	835	849	850	629
55°	629	648	670	686	692	562
65°	435	461	492	514	520	429
75°	237	272	311	338	348	252
85°	73	114	159	187	197	75
90°	21	61	106	135	145	14
95°	17	51	94	122	130	13
105°	12	33	72	97	106	13
115°	8	17	50	73	82	8
125°	5	5	29	47	56	5
135°	2	2	11	28	33	2
145°	1	0	0	7	11	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: P243712

CATALOG NUMBER: S125DRP-H1090D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1315.7	1315.7	1315.7	1315.7	1315.7
2.5°	1320.6	1316.9	1307.2	1316.9	1315.7
5°	1314.5	1313.3	1303.5	1313.3	1313.3
7.5°	1306.0	1304.7	1296.2	1306.0	1304.7
10°	1293.8	1293.8	1285.3	1292.6	1292.6
12.5°	1278.0	1278.0	1268.3	1276.8	1274.3
15°	1256.1	1259.8	1248.8	1256.1	1254.9
17.5°	1234.2	1234.2	1225.7	1231.8	1231.8
20°	1203.8	1208.7	1200.2	1206.3	1202.6
22.5°	1177.1	1179.5	1171.0	1177.1	1171.0
25°	1143.0	1147.9	1138.2	1144.2	1143.0
27.5°	1107.8	1111.4	1104.1	1111.4	1107.8
30°	1070.1	1073.7	1068.8	1073.7	1072.5
32.5°	1029.9	1037.2	1033.6	1037.2	1036.0
35°	989.8	997.1	994.7	999.5	1000.8
37.5°	948.5	955.8	955.8	961.8	963.1
40°	904.7	914.4	916.8	925.4	924.1
42.5°	862.1	871.9	875.5	886.4	886.4
45°	814.7	828.1	835.4	848.8	850.0
47.5°	769.7	784.3	795.2	807.4	809.8
50°	724.7	738.1	756.3	768.5	770.9
52.5°	676.1	693.1	711.3	728.4	733.2
55°	628.7	648.1	670.0	685.8	691.9
57.5°	580.0	600.7	625.0	644.5	649.3
60°	529.0	553.3	581.2	600.7	605.6
62.5°	481.5	508.3	537.5	558.1	565.4
65°	435.3	460.9	492.5	514.4	520.4
67.5°	385.5	413.4	446.3	470.6	476.7
70°	335.6	366.0	401.3	424.4	430.5
72.5°	284.5	318.6	356.3	381.8	389.1
75°	237.1	272.4	311.3	338.0	347.8
77.5°	192.1	228.6	267.5	295.5	304.0
80°	147.1	184.8	227.4	256.6	265.1
82.5°	107.0	147.1	190.9	220.1	228.6
85°	73.0	114.3	159.3	187.3	197.0
87.5°	45.0	85.1	131.3	159.3	169.0
90°	20.7	60.8	105.8	135.0	144.7
92.5°	18.2	55.9	99.7	128.9	137.4
95°	17.0	51.1	93.6	121.6	130.1
97.5°	15.8	46.2	87.6	115.5	124.0
100°	14.6	41.3	82.7	109.4	117.9
102.5°	13.4	37.7	76.6	103.4	110.7
105°	12.2	32.8	71.7	97.3	105.8
107.5°	10.9	28.0	66.9	91.2	99.7
110°	9.7	24.3	60.8	85.1	93.6



TEST NUMBER: P243712

CATALOG NUMBER: S125DRP-H1090D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.5	20.7	55.9	79.0	87.6
115°	8.5	17.0	49.9	73.0	81.5
117.5°	7.3	13.4	43.8	66.9	75.4
120°	6.1	9.7	38.9	60.8	69.3
122.5°	6.1	7.3	34.0	54.7	63.2
125°	4.9	4.9	29.2	47.4	55.9
127.5°	4.9	3.6	24.3	42.6	48.6
130°	3.6	2.4	20.7	37.7	43.8
132.5°	3.6	2.4	15.8	32.8	38.9
135°	2.4	2.4	10.9	28.0	32.8
137.5°	2.4	1.2	7.3	21.9	28.0
140°	1.2	1.2	2.4	17.0	21.9
142.5°	1.2	1.2	1.2	12.2	17.0
145°	1.2	0.0	0.0	7.3	10.9
147.5°	1.2	0.0	0.0	2.4	6.1
150°	0.0	0.0	0.0	0.0	1.2
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



TEST NUMBER: P243712
 CATALOG NUMBER: S125DRP-H1090D840-X4F0-XX-UDD-D-W

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.68	19.21	18.14	19.65	20.12	18.77	20.30	19.23	20.74	21.21
	3H	19.33	20.72	19.80	21.17	21.68	20.94	22.33	21.40	22.78	23.28
	4H	19.90	21.22	20.39	21.69	22.20	21.90	23.22	22.39	23.68	24.20
	6H	20.29	21.51	20.79	21.99	22.53	22.80	24.03	23.30	24.51	25.04
	8H	20.39	21.57	20.91	22.07	22.61	23.23	24.40	23.75	24.91	25.45
	12H	20.46	21.58	20.98	22.08	22.65	23.68	24.81	24.20	25.30	25.88
4H	2H	18.45	19.76	18.94	20.23	20.75	19.30	20.62	19.79	21.08	21.60
	3H	20.33	21.44	20.83	21.96	22.50	21.68	22.80	22.18	23.31	23.85
	4H	21.03	22.05	21.55	22.57	23.15	22.79	23.81	23.31	24.33	24.91
	6H	21.54	22.44	22.09	22.99	23.58	23.86	24.76	24.40	25.30	25.89
	8H	21.70	22.54	22.25	23.09	23.69	24.37	25.22	24.92	25.77	26.37
	12H	21.80	22.56	22.37	23.14	23.75	24.93	25.69	25.50	26.27	26.87
8H	4H	21.51	22.36	22.06	22.90	23.51	23.05	23.89	23.60	24.44	25.04
	6H	22.18	22.89	22.76	23.48	24.09	24.27	24.98	24.85	25.57	26.18
	8H	22.42	23.06	23.02	23.66	24.28	24.91	25.54	25.50	26.15	26.77
	12H	22.61	23.18	23.20	23.77	24.45	25.61	26.18	26.21	26.77	27.46
12H	4H	21.61	22.37	22.18	22.95	23.56	23.07	23.83	23.64	24.41	25.01
	6H	22.34	22.98	22.94	23.59	24.21	24.32	24.96	24.91	25.56	26.18
	8H	22.66	23.23	23.26	23.82	24.51	25.02	25.59	25.62	26.18	26.87