

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: P242852

Luminaire Tested: S125DRP-S1090D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242852
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-S1090D840-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

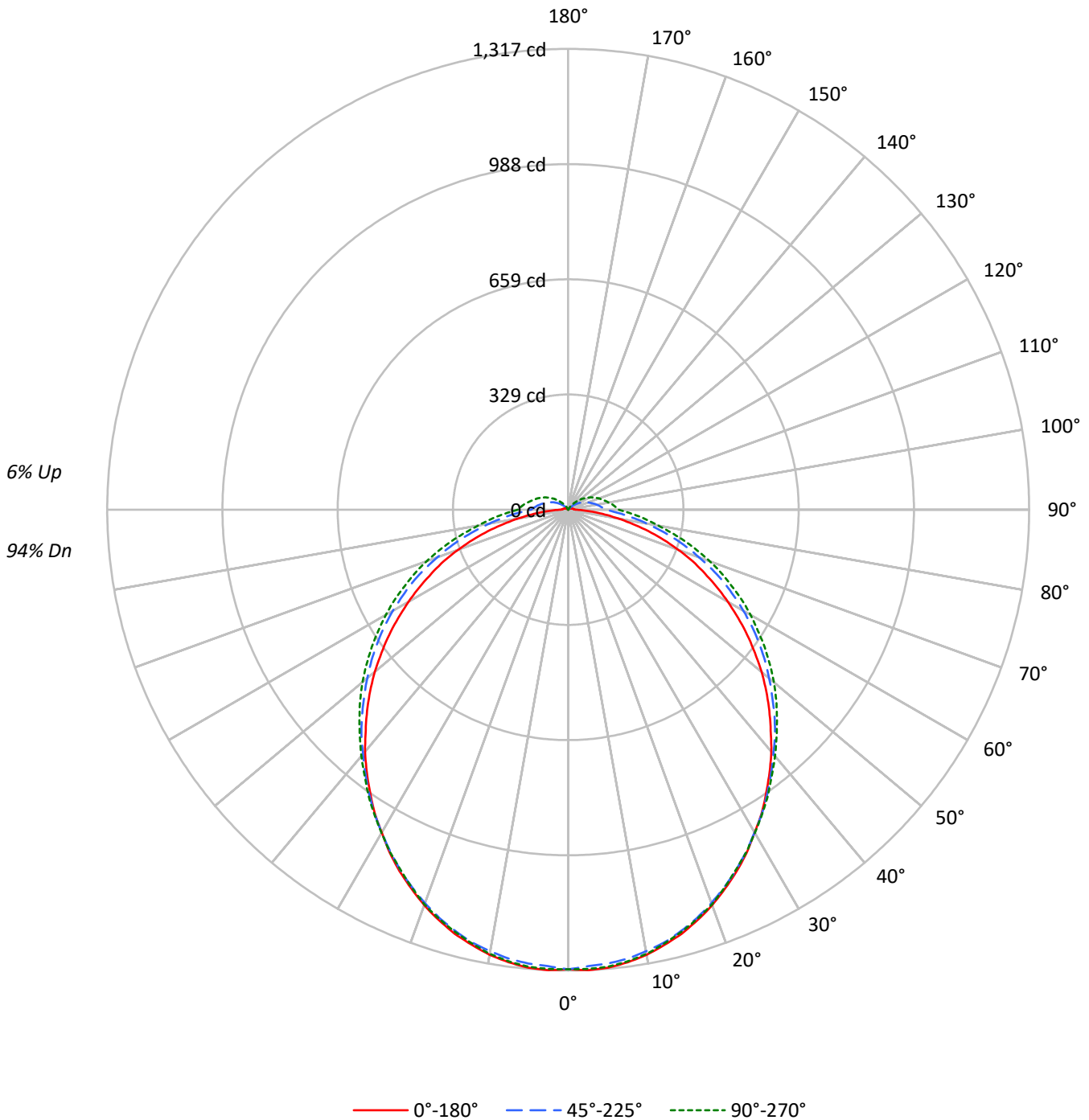
Lumens per Lamp: N/A
Luminaire Lumens: 4069.3 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 34.8
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: P242852

CATALOG NUMBER: S125DRP-S1090D840-X4F0-XX-UDD-D-W

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	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°	9336	9336	9336
5°	9354	9156	9182
10°	9287	8985	8966
15°	9176	8782	8695
20°	9027	8533	8425
25°	8849	8268	8093
30°	8633	7976	7792
35°	8432	7708	7515
40°	8228	7426	7236
45°	7996	7183	6988
50°	7775	6919	6767
55°	7509	6669	6508
60°	7218	6384	6243
65°	6914	6086	5945
70°	6569	5679	5636
75°	6025	5286	5258
80°	5308	4805	4843
85°	4634	4459	4674

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7996 cd/sqm



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CATALOG NUMBER: S125DRP-S1090D840-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.3	3.1
10°-20°	352.9	8.7
20°-30°	524.7	12.9
30°-40°	621.4	15.3
40°-50°	642.5	15.8
50°-60°	591.8	14.5
60°-70°	478.4	11.8
70°-80°	320.1	7.9
80°-90°	165.5	4.1
90°-100°	93.2	2.3
100°-110°	68.7	1.7
110°-120°	46.0	1.1
120°-130°	26.0	0.6
130°-140°	11.4	0.3
140°-150°	2.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1001.9	24.6
0°-40°	1623.3	39.9
0°-60°	2857.6	70.2
0°-90°	3821.6	93.9
90°-120°	207.9	5.1
90°-150°	247.6	6.1
90°-180°	248.0	6.1
0°-180°	4069.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1314	1314	1314	1314	1314	
5°	1314	1311	1302	1312	1311	125
15°	1254	1256	1247	1254	1249	353
25°	1140	1144	1136	1141	1135	525
35°	986	996	992	996	996	618
45°	813	827	833	842	844	627
55°	625	645	666	680	685	558
65°	430	460	491	510	515	427
75°	237	270	312	337	344	251
85°	71	113	158	187	197	74
90°	21	62	106	135	144	14
95°	17	50	94	122	131	13
105°	12	32	71	97	106	12
115°	8	17	50	73	81	8
125°	5	4	30	50	57	4
135°	3	1	10	27	34	2
145°	1	0	0	6	12	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°	1313.6	1313.6	1313.6	1313.6	1313.6
2.5°	1317.4	1314.9	1305.9	1314.9	1313.6
5°	1313.6	1311.0	1302.0	1312.3	1311.0
7.5°	1304.6	1303.3	1294.3	1303.3	1302.0
10°	1291.7	1291.7	1281.4	1290.4	1289.1
12.5°	1273.7	1274.9	1267.2	1273.7	1269.8
15°	1254.3	1255.6	1246.6	1254.3	1249.2
17.5°	1229.9	1232.4	1223.4	1229.9	1226.0
20°	1202.8	1205.4	1196.4	1200.3	1200.3
22.5°	1171.9	1177.1	1166.8	1171.9	1168.1
25°	1139.7	1143.6	1135.9	1141.0	1134.6
27.5°	1105.0	1110.1	1101.1	1105.0	1102.4
30°	1065.0	1072.8	1065.0	1067.6	1066.3
32.5°	1029.0	1035.4	1030.3	1032.8	1031.5
35°	986.5	995.5	991.6	995.5	995.5
37.5°	945.3	953.0	951.7	956.9	955.6
40°	902.8	913.1	911.8	916.9	919.5
42.5°	856.4	870.6	874.4	880.9	880.9
45°	812.6	826.8	833.2	842.2	843.5
47.5°	767.5	780.4	790.7	803.6	806.2
50°	721.2	735.3	749.5	763.7	767.5
52.5°	672.2	690.3	708.3	723.8	726.3
55°	624.6	645.2	665.8	680.0	685.1
57.5°	575.7	600.1	623.3	638.8	642.6
60°	526.7	552.5	578.2	597.6	601.4
62.5°	479.1	504.8	533.2	555.1	560.2
65°	430.1	459.8	490.7	510.0	515.1
67.5°	385.1	413.4	444.3	467.5	473.9
70°	334.8	364.5	397.9	422.4	430.1
72.5°	285.9	316.8	354.2	381.2	386.3
75°	237.0	270.4	311.7	337.4	343.8
77.5°	189.3	227.9	266.6	294.9	300.1
80°	145.5	184.2	227.9	256.3	261.4
82.5°	105.6	146.8	191.9	218.9	229.2
85°	70.8	113.3	158.4	186.7	197.0
87.5°	45.1	86.3	130.1	159.7	168.7
90°	20.6	61.8	105.6	135.2	144.2
92.5°	18.0	55.4	100.5	128.8	137.8
95°	16.7	50.2	94.0	122.3	131.4
97.5°	15.5	46.4	88.9	115.9	124.9
100°	14.2	41.2	82.4	109.5	117.2
102.5°	12.9	37.3	77.3	103.0	110.8
105°	11.6	32.2	70.8	96.6	105.6
107.5°	10.3	28.3	65.7	91.4	99.2
110°	9.0	24.5	60.5	85.0	94.0



TEST NUMBER: P242852

CATALOG NUMBER: S125DRP-S1090D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.0	20.6	55.4	78.6	87.6
115°	7.7	16.7	50.2	73.4	81.1
117.5°	6.4	12.9	45.1	67.0	76.0
120°	6.4	10.3	39.9	61.8	69.5
122.5°	5.2	6.4	34.8	55.4	63.1
125°	5.2	3.9	29.6	50.2	56.7
127.5°	3.9	2.6	24.5	43.8	51.5
130°	3.9	2.6	20.6	38.6	45.1
132.5°	2.6	2.6	15.5	33.5	38.6
135°	2.6	1.3	10.3	27.0	33.5
137.5°	2.6	1.3	6.4	21.9	27.0
140°	1.3	1.3	2.6	16.7	21.9
142.5°	1.3	0.0	0.0	11.6	16.7
145°	1.3	0.0	0.0	6.4	11.6
147.5°	0.0	0.0	0.0	2.6	5.2
150°	0.0	0.0	0.0	0.0	1.3
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

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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	20.11	18.72	20.25	19.18	20.69	21.16
	3H	19.33	20.72	19.80	21.17	21.68	20.90	22.29	21.37	22.74	23.25
	4H	19.90	21.22	20.39	21.69	22.20	21.86	23.18	22.35	23.65	24.17
	6H	20.28	21.50	20.78	21.99	22.52	22.76	23.98	23.26	24.47	25.00
	8H	20.38	21.56	20.90	22.06	22.60	23.19	24.37	23.71	24.87	25.41
	12H	20.44	21.57	20.97	22.07	22.64	23.65	24.78	24.17	25.27	25.85
4H	2H	18.44	19.76	18.93	20.23	20.75	19.26	20.57	19.75	21.04	21.56
	3H	20.32	21.44	20.82	21.95	22.49	21.65	22.77	22.15	23.28	23.82
	4H	21.02	22.04	21.55	22.56	23.14	22.76	23.78	23.29	24.30	24.88
	6H	21.53	22.43	22.08	22.98	23.57	23.83	24.72	24.37	25.27	25.86
	8H	21.68	22.52	22.23	23.07	23.67	24.35	25.19	24.90	25.74	26.34
	12H	21.78	22.54	22.35	23.12	23.73	24.90	25.66	25.47	26.24	26.85
8H	4H	21.51	22.35	22.06	22.90	23.50	23.02	23.86	23.57	24.41	25.01
	6H	22.17	22.88	22.75	23.47	24.08	24.24	24.95	24.82	25.54	26.15
	8H	22.41	23.05	23.01	23.65	24.27	24.88	25.52	25.48	26.12	26.74
	12H	22.59	23.16	23.19	23.75	24.44	25.59	26.16	26.19	26.75	27.44
12H	4H	21.61	22.37	22.18	22.95	23.55	23.04	23.80	23.61	24.38	24.99
	6H	22.33	22.97	22.93	23.58	24.20	24.29	24.93	24.89	25.53	26.16
	8H	22.65	23.22	23.25	23.81	24.50	25.00	25.57	25.59	26.16	26.85