

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: P243707

Luminaire Tested: S125DRP-H1090D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243707  
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-H1090D835-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

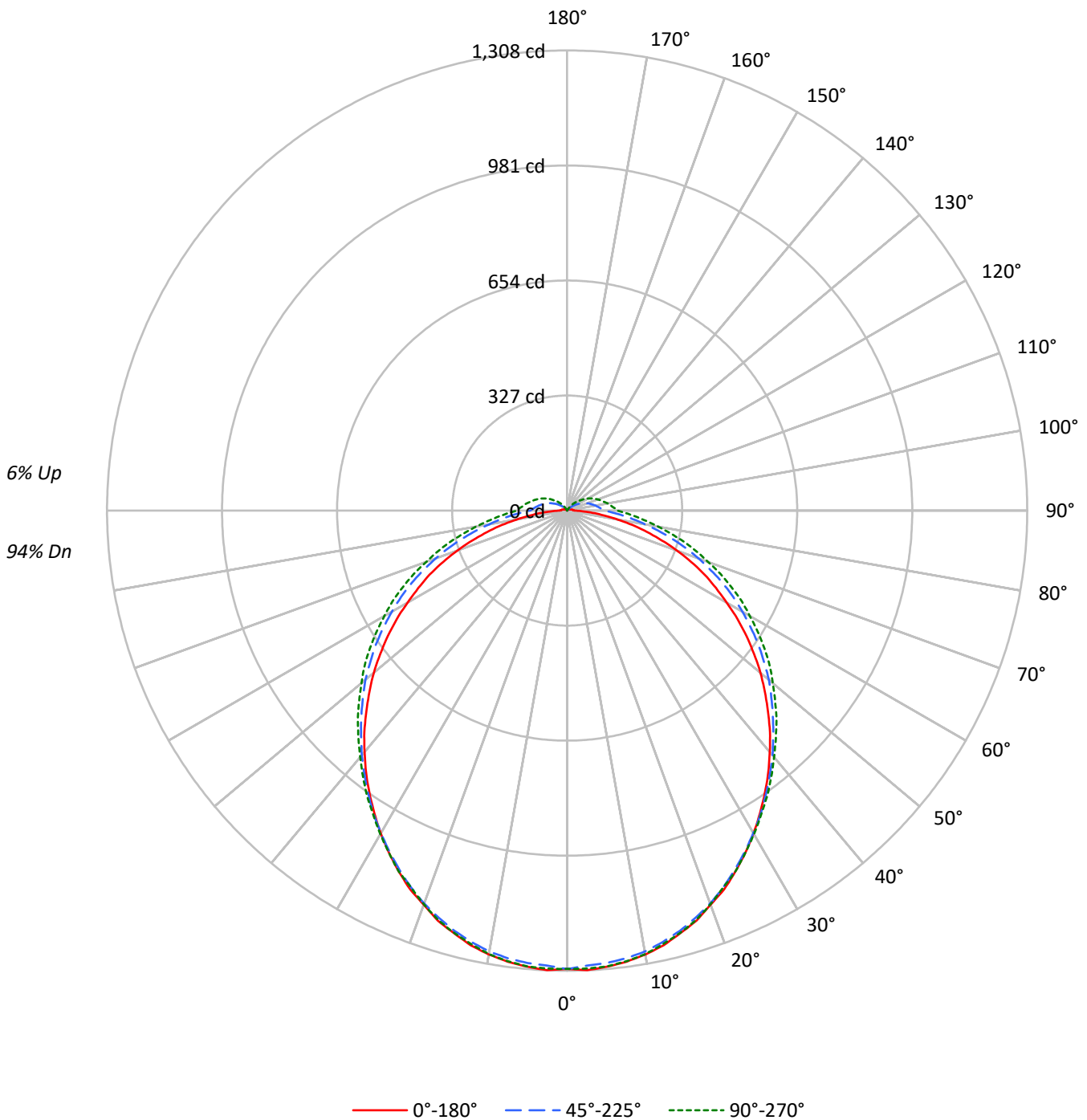
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4045.3 lumens  
Efficiency: N/A  
Efficacy: 128.4 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 (Ain): 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

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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	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°	9259	9259	9259
5°	9269	9077	9108
10°	9211	8924	8903
15°	9100	8712	8649
20°	8946	8476	8359
25°	8788	8203	8074
30°	8589	7927	7760
35°	8378	7657	7481
40°	8165	7394	7202
45°	7938	7131	6973
50°	7736	6914	6731
55°	7484	6646	6508
60°	7178	6355	6224
65°	6930	6049	5948
70°	6520	5672	5586
75°	5969	5226	5267
80°	5315	4748	4863
85°	4726	4439	4629

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7938 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.3	3.0
10°-20°	350.3	8.7
20°-30°	521.4	12.9
30°-40°	617.7	15.3
40°-50°	639.1	15.8
50°-60°	589.5	14.6
60°-70°	476.4	11.8
70°-80°	318.3	7.9
80°-90°	164.2	4.1
90°-100°	92.1	2.3
100°-110°	68.3	1.7
110°-120°	45.5	1.1
120°-130°	25.4	0.6
130°-140°	11.4	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°	994.9	24.6
0°-40°	1612.6	39.9
0°-60°	2841.2	70.2
0°-90°	3800.1	93.9
90°-120°	205.9	5.1
90°-150°	245.2	6.1
90°-180°	245.0	6.1
0°-180°	4045.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1303	1303	1303	1303	1303	
5°	1302	1300	1291	1300	1300	124
15°	1244	1247	1237	1244	1243	351
25°	1132	1137	1127	1133	1132	521
35°	980	987	985	990	991	613
45°	807	820	827	840	842	623
55°	622	642	664	679	685	556
65°	431	456	488	509	515	425
75°	235	270	308	335	344	249
85°	72	113	158	185	195	74
90°	20	60	105	134	143	14
95°	17	51	93	120	129	13
105°	12	32	71	96	105	13
115°	8	17	49	72	81	8
125°	5	5	29	47	55	5
135°	2	2	11	28	32	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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1302.8	1302.8	1302.8	1302.8	1302.8
2.5°	1307.7	1304.0	1294.4	1304.0	1302.8
5°	1301.6	1300.4	1290.8	1300.4	1300.4
7.5°	1293.2	1292.0	1283.6	1293.2	1292.0
10°	1281.2	1281.2	1272.7	1280.0	1280.0
12.5°	1265.5	1265.5	1255.9	1264.3	1261.9
15°	1243.8	1247.4	1236.6	1243.8	1242.6
17.5°	1222.2	1222.2	1213.7	1219.8	1219.8
20°	1192.1	1196.9	1188.4	1194.5	1190.9
22.5°	1165.6	1168.0	1159.5	1165.6	1159.5
25°	1131.9	1136.7	1127.0	1133.1	1131.9
27.5°	1096.9	1100.5	1093.3	1100.5	1096.9
30°	1059.6	1063.2	1058.4	1063.2	1062.0
32.5°	1019.9	1027.1	1023.5	1027.1	1025.9
35°	980.1	987.4	985.0	989.8	991.0
37.5°	939.2	946.4	946.4	952.4	953.6
40°	895.9	905.5	907.9	916.3	915.1
42.5°	853.7	863.3	867.0	877.8	877.8
45°	806.7	820.0	827.2	840.5	841.7
47.5°	762.2	776.6	787.5	799.5	801.9
50°	717.6	730.9	749.0	761.0	763.4
52.5°	669.5	686.3	704.4	721.3	726.1
55°	622.5	641.8	663.5	679.1	685.1
57.5°	574.4	594.8	618.9	638.2	643.0
60°	523.8	547.9	575.6	594.8	599.6
62.5°	476.8	503.3	532.2	552.7	559.9
65°	431.1	456.4	487.7	509.3	515.4
67.5°	381.7	409.4	441.9	466.0	472.0
70°	332.3	362.4	397.4	420.2	426.3
72.5°	281.8	315.5	352.8	378.1	385.3
75°	234.8	269.7	308.2	334.7	344.4
77.5°	190.2	226.4	264.9	292.6	301.0
80°	145.7	183.0	225.2	254.1	262.5
82.5°	106.0	145.7	189.0	217.9	226.4
85°	72.2	113.2	157.7	185.4	195.1
87.5°	44.6	84.3	130.0	157.7	167.4
90°	20.5	60.2	104.8	133.7	143.3
92.5°	18.1	55.4	98.7	127.6	136.1
95°	16.9	50.6	92.7	120.4	128.8
97.5°	15.7	45.8	86.7	114.4	122.8
100°	14.4	40.9	81.9	108.4	116.8
102.5°	13.2	37.3	75.9	102.3	109.6
105°	12.0	32.5	71.0	96.3	104.8
107.5°	10.8	27.7	66.2	90.3	98.7
110°	9.6	24.1	60.2	84.3	92.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.4	20.5	55.4	78.3	86.7
115°	8.4	16.9	49.4	72.2	80.7
117.5°	7.2	13.2	43.3	66.2	74.7
120°	6.0	9.6	38.5	60.2	68.6
122.5°	6.0	7.2	33.7	54.2	62.6
125°	4.8	4.8	28.9	47.0	55.4
127.5°	4.8	3.6	24.1	42.1	48.2
130°	3.6	2.4	20.5	37.3	43.3
132.5°	3.6	2.4	15.7	32.5	38.5
135°	2.4	2.4	10.8	27.7	32.5
137.5°	2.4	1.2	7.2	21.7	27.7
140°	1.2	1.2	2.4	16.9	21.7
142.5°	1.2	1.2	1.2	12.0	16.9
145°	1.2	0.0	0.0	7.2	10.8
147.5°	1.2	0.0	0.0	2.4	6.0
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



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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	17.65	19.18	18.10	19.62	20.08	18.74	20.27	19.19	20.71	21.17
	3H	19.30	20.69	19.77	21.14	21.64	20.90	22.29	21.37	22.74	23.25
	4H	19.87	21.18	20.36	21.65	22.17	21.86	23.18	22.35	23.65	24.17
	6H	20.25	21.48	20.76	21.96	22.49	22.77	23.99	23.27	24.47	25.01
	8H	20.36	21.53	20.87	22.04	22.58	23.20	24.37	23.71	24.87	25.41
	12H	20.42	21.55	20.94	22.04	22.62	23.65	24.77	24.17	25.27	25.84
4H	2H	18.41	19.73	18.90	20.20	20.72	19.26	20.58	19.76	21.05	21.57
	3H	20.29	21.41	20.80	21.92	22.46	21.65	22.76	22.15	23.27	23.82
	4H	21.00	22.02	21.52	22.54	23.11	22.76	23.78	23.28	24.30	24.87
	6H	21.51	22.41	22.05	22.96	23.54	23.82	24.72	24.37	25.27	25.86
	8H	21.66	22.51	22.21	23.05	23.66	24.34	25.18	24.89	25.73	26.33
	12H	21.77	22.53	22.34	23.11	23.71	24.89	25.65	25.46	26.23	26.84
8H	4H	21.48	22.32	22.03	22.87	23.47	23.01	23.86	23.56	24.40	25.01
	6H	22.15	22.86	22.73	23.45	24.06	24.24	24.95	24.82	25.54	26.14
	8H	22.39	23.03	22.98	23.63	24.25	24.87	25.51	25.47	26.11	26.73
	12H	22.57	23.14	23.17	23.73	24.42	25.58	26.15	26.17	26.74	27.43
12H	4H	21.58	22.34	22.15	22.92	23.52	23.03	23.79	23.60	24.37	24.98
	6H	22.31	22.95	22.90	23.55	24.17	24.28	24.92	24.88	25.53	26.15
	8H	22.63	23.20	23.22	23.79	24.47	24.99	25.55	25.58	26.15	26.83