

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: P243728

Luminaire Tested: S125DRP-H1270D940-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243728  
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-H1270D940-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

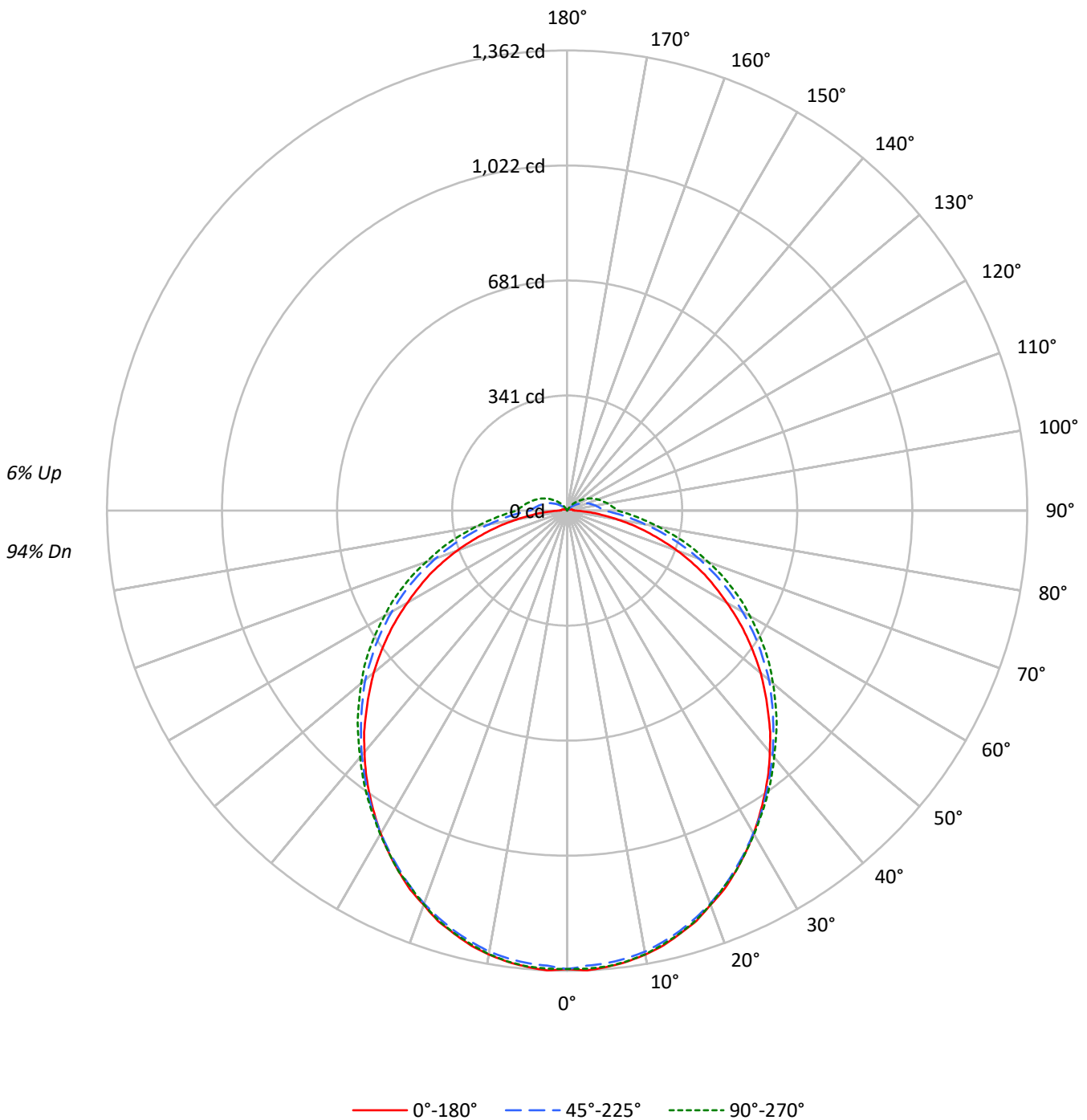
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4213.9 lumens  
Efficiency: N/A  
Efficacy: 111.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')  
CIE Type: Direct  
  
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	9645	9645	9645
5°	9655	9456	9487
10°	9595	9296	9274
15°	9479	9075	9010
20°	9319	8830	8707
25°	9154	8545	8410
30°	8948	8257	8084
35°	8727	7975	7793
40°	8505	7702	7502
45°	8269	7428	7264
50°	8060	7202	7011
55°	7796	6923	6779
60°	7477	6620	6484
65°	7218	6301	6195
70°	6793	5907	5818
75°	6218	5445	5485
80°	5538	4946	5065
85°	4929	4625	4821

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8269 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.4	3.0
10°-20°	364.9	8.7
20°-30°	543.1	12.9
30°-40°	643.4	15.3
40°-50°	665.8	15.8
50°-60°	614.0	14.6
60°-70°	496.2	11.8
70°-80°	331.6	7.9
80°-90°	171.1	4.1
90°-100°	95.9	2.3
100°-110°	71.2	1.7
110°-120°	47.4	1.1
120°-130°	26.5	0.6
130°-140°	11.9	0.3
140°-150°	2.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1036.4	24.6
0°-40°	1679.8	39.9
0°-60°	2959.6	70.2
0°-90°	3958.5	93.9
90°-120°	214.5	5.1
90°-150°	255.4	6.1
90°-180°	255.0	6.1
0°-180°	4213.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1357	1357	1357	1357	1357	
5°	1356	1355	1345	1355	1355	129
15°	1296	1300	1288	1296	1294	365
25°	1179	1184	1174	1180	1179	543
35°	1021	1028	1026	1031	1032	639
45°	840	854	862	876	877	649
55°	648	668	691	707	714	579
65°	449	475	508	531	537	443
75°	245	281	321	349	359	260
85°	75	118	164	193	203	77
90°	21	63	109	139	149	15
95°	18	53	97	125	134	14
105°	12	34	74	100	109	13
115°	9	18	51	75	84	8
125°	5	5	30	49	58	5
135°	2	2	11	29	34	2
145°	1	0	0	8	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°	1357.1	1357.1	1357.1	1357.1	1357.1
2.5°	1362.2	1358.4	1348.4	1358.4	1357.1
5°	1355.9	1354.6	1344.6	1354.6	1354.6
7.5°	1347.1	1345.9	1337.1	1347.1	1345.9
10°	1334.6	1334.6	1325.8	1333.3	1333.3
12.5°	1318.3	1318.3	1308.2	1317.0	1314.5
15°	1295.7	1299.5	1288.2	1295.7	1294.4
17.5°	1273.1	1273.1	1264.3	1270.6	1270.6
20°	1241.8	1246.8	1238.0	1244.3	1240.5
22.5°	1214.2	1216.7	1207.9	1214.2	1207.9
25°	1179.0	1184.1	1174.0	1180.3	1179.0
27.5°	1142.7	1146.4	1138.9	1146.4	1142.7
30°	1103.8	1107.5	1102.5	1107.5	1106.3
32.5°	1062.4	1069.9	1066.2	1069.9	1068.7
35°	1021.0	1028.5	1026.0	1031.0	1032.3
37.5°	978.4	985.9	985.9	992.1	993.4
40°	933.2	943.2	945.7	954.5	953.3
42.5°	889.3	899.3	903.1	914.4	914.4
45°	840.4	854.2	861.7	875.5	876.8
47.5°	794.0	809.0	820.3	832.9	835.4
50°	747.6	761.4	780.2	792.7	795.2
52.5°	697.4	714.9	733.8	751.3	756.3
55°	648.5	668.5	691.1	707.4	713.7
57.5°	598.3	619.6	644.7	664.8	669.8
60°	545.6	570.7	599.6	619.6	624.6
62.5°	496.7	524.3	554.4	575.7	583.2
65°	449.0	475.4	508.0	530.6	536.8
67.5°	397.6	426.5	460.3	485.4	491.7
70°	346.2	377.5	413.9	437.7	444.0
72.5°	293.5	328.6	367.5	393.8	401.4
75°	244.6	281.0	321.1	348.7	358.7
77.5°	198.2	235.8	275.9	304.8	313.6
80°	151.8	190.7	234.6	264.7	273.4
82.5°	110.4	151.8	196.9	227.0	235.8
85°	75.3	117.9	164.3	193.2	203.2
87.5°	46.4	87.8	135.5	164.3	174.3
90°	21.3	62.7	109.1	139.2	149.3
92.5°	18.8	57.7	102.9	133.0	141.7
95°	17.6	52.7	96.6	125.4	134.2
97.5°	16.3	47.7	90.3	119.2	127.9
100°	15.1	42.6	85.3	112.9	121.7
102.5°	13.8	38.9	79.0	106.6	114.1
105°	12.5	33.9	74.0	100.3	109.1
107.5°	11.3	28.8	69.0	94.1	102.9
110°	10.0	25.1	62.7	87.8	96.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.8	21.3	57.7	81.5	90.3
115°	8.8	17.6	51.4	75.3	84.0
117.5°	7.5	13.8	45.2	69.0	77.8
120°	6.3	10.0	40.1	62.7	71.5
122.5°	6.3	7.5	35.1	56.4	65.2
125°	5.0	5.0	30.1	48.9	57.7
127.5°	5.0	3.8	25.1	43.9	50.2
130°	3.8	2.5	21.3	38.9	45.2
132.5°	3.8	2.5	16.3	33.9	40.1
135°	2.5	2.5	11.3	28.8	33.9
137.5°	2.5	1.3	7.5	22.6	28.8
140°	1.3	1.3	2.5	17.6	22.6
142.5°	1.3	1.3	1.3	12.5	17.6
145°	1.3	0.0	0.0	7.5	11.3
147.5°	1.3	0.0	0.0	2.5	6.3
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	17.79	19.32	18.25	19.76	20.22	18.88	20.41	19.34	20.85	21.31
	3H	19.44	20.83	19.91	21.28	21.79	21.04	22.44	21.51	22.89	23.39
	4H	20.01	21.33	20.50	21.79	22.31	22.01	23.32	22.50	23.79	24.31
	6H	20.39	21.62	20.90	22.10	22.64	22.91	24.13	23.41	24.62	25.15
	8H	20.50	21.67	21.02	22.18	22.72	23.34	24.51	23.85	25.02	25.56
	12H	20.56	21.69	21.09	22.19	22.76	23.79	24.91	24.31	25.41	25.98
4H	2H	18.55	19.87	19.05	20.34	20.86	19.41	20.72	19.90	21.19	21.71
	3H	20.43	21.55	20.94	22.06	22.61	21.79	22.90	22.29	23.42	23.96
	4H	21.14	22.16	21.66	22.68	23.26	22.90	23.92	23.42	24.44	25.01
	6H	21.65	22.55	22.20	23.10	23.69	23.97	24.86	24.51	25.41	26.00
	8H	21.81	22.65	22.36	23.20	23.80	24.48	25.32	25.03	25.87	26.47
	12H	21.91	22.67	22.48	23.25	23.86	25.03	25.80	25.60	26.37	26.98
8H	4H	21.62	22.46	22.17	23.01	23.61	23.15	24.00	23.70	24.55	25.15
	6H	22.29	23.00	22.87	23.59	24.20	24.38	25.09	24.96	25.68	26.29
	8H	22.53	23.17	23.13	23.77	24.39	25.01	25.65	25.61	26.26	26.88
	12H	22.71	23.28	23.31	23.87	24.56	25.72	26.29	26.32	26.88	27.57
12H	4H	21.72	22.48	22.29	23.06	23.67	23.17	23.94	23.74	24.51	25.12
	6H	22.45	23.09	23.05	23.69	24.31	24.43	25.07	25.02	25.67	26.29
	8H	22.77	23.34	23.37	23.93	24.62	25.13	25.70	25.72	26.29	26.98