

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: P242332

Luminaire Tested: S122DRP-S1005D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242332  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S1005D835-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

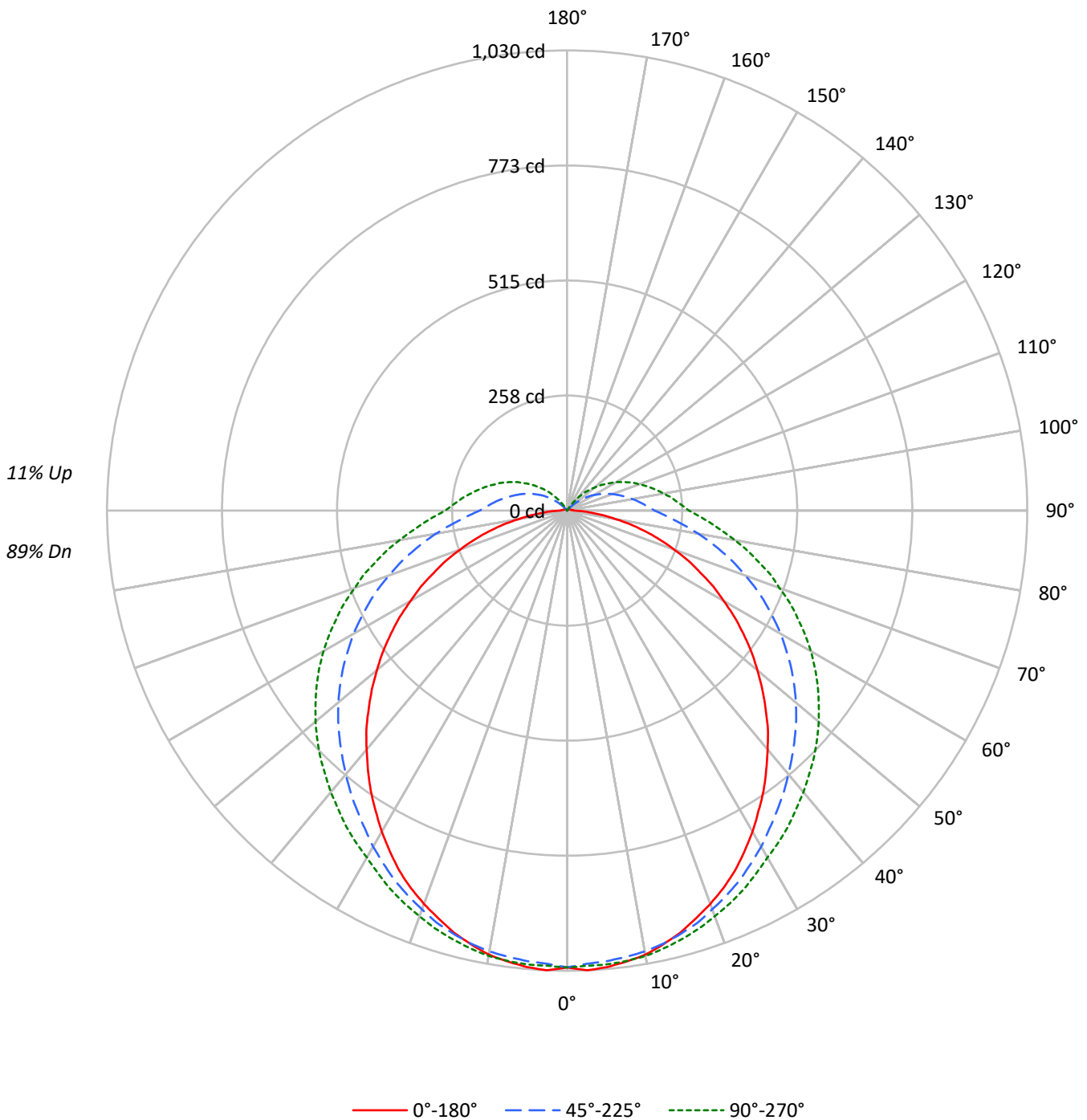
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3902.0 lumens  
Efficiency: N/A  
Efficacy: 94.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 41.1  
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	19478	19478	19478
5°	19573	18671	18569
10°	19448	18044	17787
15°	19179	17393	16982
20°	18840	16707	16215
25°	18503	16050	15520
30°	18031	15379	14830
35°	17552	14733	14326
40°	17051	14176	13825
45°	16571	13671	13390
50°	16058	13208	12959
55°	15520	12714	12521
60°	14860	12200	12060
65°	14175	11608	11526
70°	13404	10971	10952
75°	12420	10333	10410
80°	10872	9674	9853
85°	9368	9060	9376

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16571 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.9	2.5
10°-20°	278.0	7.1
20°-30°	421.3	10.8
30°-40°	513.0	13.1
40°-50°	552.0	14.1
50°-60°	536.0	13.7
60°-70°	468.1	12.0
70°-80°	360.3	9.2
80°-90°	241.3	6.2
90°-100°	166.5	4.3
100°-110°	121.6	3.1
110°-120°	80.3	2.1
120°-130°	44.7	1.1
130°-140°	18.8	0.5
140°-150°	3.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	796.3	20.4
0°-40°	1309.3	33.6
0°-60°	2397.3	61.4
0°-90°	3467.0	88.9
90°-120°	368.3	9.4
90°-150°	435.0	11.1
90°-180°	435.0	11.1
0°-180°	3902.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1026	1021	1012	1021	1020	97
15°	978	981	981	994	993	276
25°	889	900	913	931	935	409
35°	766	791	820	852	863	479
45°	628	668	720	766	781	485
55°	482	535	612	666	685	431
65°	329	402	489	550	569	327
75°	182	265	360	424	443	193
85°	53	145	240	302	323	56
90°	15	101	196	255	273	10
95°	12	82	170	227	244	9
105°	7	50	128	179	196	8
115°	6	22	89	133	150	5
125°	3	3	50	90	104	3
135°	2	2	16	47	59	2
145°	0	0	0	9	16	0
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°	1022.6	1022.6	1022.6	1022.6	1022.6
2.5°	1030.0	1025.6	1015.2	1022.6	1019.7
5°	1025.6	1021.2	1012.3	1021.2	1019.7
7.5°	1018.2	1015.2	1007.8	1018.2	1016.7
10°	1009.3	1006.3	1001.9	1013.7	1012.3
12.5°	994.5	996.0	993.0	1004.8	1003.4
15°	978.2	981.1	981.1	994.5	993.0
17.5°	957.4	963.4	967.8	981.1	981.1
20°	936.7	944.1	950.0	966.3	966.3
22.5°	914.4	923.3	932.2	948.5	951.5
25°	889.2	899.6	913.0	930.7	935.2
27.5°	859.6	875.9	890.7	913.0	915.9
30°	830.0	849.2	868.5	892.2	896.7
32.5°	797.4	819.6	843.3	871.5	880.4
35°	766.2	791.4	819.6	852.2	862.6
37.5°	732.1	760.3	795.9	831.4	841.8
40°	698.1	730.7	770.7	809.2	822.6
42.5°	665.5	698.1	745.5	788.5	801.8
45°	628.4	668.4	720.3	766.2	781.1
47.5°	592.8	635.8	695.1	742.5	758.8
50°	555.8	601.7	668.4	718.8	735.1
52.5°	520.2	569.1	640.3	692.1	709.9
55°	481.7	535.0	612.1	665.5	684.7
57.5°	444.6	503.9	581.0	638.8	658.0
60°	404.6	468.3	552.8	609.1	629.9
62.5°	369.0	435.7	520.2	581.0	600.2
65°	329.0	401.6	489.1	549.9	569.1
67.5°	293.5	369.0	458.0	518.7	539.5
70°	254.9	332.0	423.9	487.6	505.4
72.5°	219.3	299.4	392.8	455.0	477.2
75°	182.3	265.3	360.1	423.9	443.1
77.5°	146.7	232.7	329.0	392.8	413.5
80°	111.2	201.6	297.9	360.1	380.9
82.5°	81.5	170.4	268.3	330.5	349.8
85°	53.4	145.2	240.1	302.3	323.1
87.5°	32.6	121.5	216.4	277.1	296.4
90°	14.8	100.8	195.6	254.9	272.7
92.5°	13.3	91.9	182.3	240.1	257.9
95°	11.9	81.5	170.4	226.8	244.5
97.5°	10.4	74.1	160.1	214.9	232.7
100°	10.4	65.2	148.2	203.0	219.3
102.5°	8.9	57.8	137.8	191.2	207.5
105°	7.4	50.4	127.5	179.3	195.6
107.5°	7.4	43.0	117.1	167.5	183.8
110°	5.9	35.6	108.2	155.6	171.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	5.9	29.6	97.8	145.2	161.5
115°	5.9	22.2	88.9	133.4	149.7
117.5°	4.4	16.3	78.6	123.0	137.8
120°	4.4	10.4	69.7	111.2	127.5
122.5°	4.4	5.9	60.8	100.8	114.1
125°	3.0	3.0	50.4	90.4	103.7
127.5°	3.0	1.5	41.5	78.6	91.9
130°	3.0	1.5	32.6	68.2	80.0
132.5°	3.0	1.5	23.7	57.8	69.7
135°	1.5	1.5	16.3	47.4	59.3
137.5°	1.5	1.5	8.9	37.1	47.4
140°	1.5	0.0	3.0	26.7	35.6
142.5°	1.5	0.0	0.0	17.8	25.2
145°	0.0	0.0	0.0	8.9	16.3
147.5°	0.0	0.0	0.0	1.5	5.9
150°	0.0	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

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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	18.54	20.02	19.06	20.55	21.12	21.60	23.08	22.12	23.61	24.19
	3H	20.04	21.39	20.57	21.93	22.54	24.23	25.58	24.76	26.12	26.73
	4H	20.54	21.82	21.09	22.38	23.00	25.51	26.79	26.06	27.34	27.97
	6H	20.85	22.05	21.42	22.62	23.26	26.84	28.04	27.41	28.60	29.25
	8H	20.93	22.08	21.51	22.67	23.32	27.52	28.67	28.10	29.26	29.91
	12H	20.97	22.07	21.56	22.65	23.33	28.27	29.38	28.86	29.96	30.64
4H	2H	19.65	20.93	20.21	21.49	22.11	21.99	23.27	22.55	23.83	24.46
	3H	21.40	22.50	21.98	23.10	23.75	24.83	25.93	25.40	26.52	27.17
	4H	22.05	23.06	22.64	23.66	24.34	26.27	27.28	26.86	27.88	28.56
	6H	22.50	23.39	23.11	24.02	24.71	27.78	28.67	28.39	29.30	29.99
	8H	22.62	23.47	23.24	24.09	24.80	28.56	29.40	29.17	30.03	30.73
	12H	22.70	23.47	23.34	24.12	24.83	29.43	30.19	30.06	30.84	31.56
8H	4H	22.89	23.73	23.51	24.36	25.07	26.47	27.31	27.08	27.93	28.64
	6H	23.55	24.27	24.20	24.94	25.65	28.13	28.84	28.77	29.51	30.22
	8H	23.78	24.43	24.44	25.10	25.83	29.03	29.68	29.69	30.35	31.08
	12H	23.95	24.53	24.61	25.19	25.98	30.06	30.64	30.72	31.31	32.09
12H	4H	23.12	23.89	23.76	24.54	25.25	26.47	27.24	27.11	27.89	28.60
	6H	23.90	24.54	24.55	25.22	25.94	28.16	28.81	28.82	29.48	30.21
	8H	24.23	24.81	24.89	25.47	26.26	29.13	29.71	29.79	30.37	31.16