

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: P243112

Luminaire Tested: S122DRP-H675D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243112  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-H675D927-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

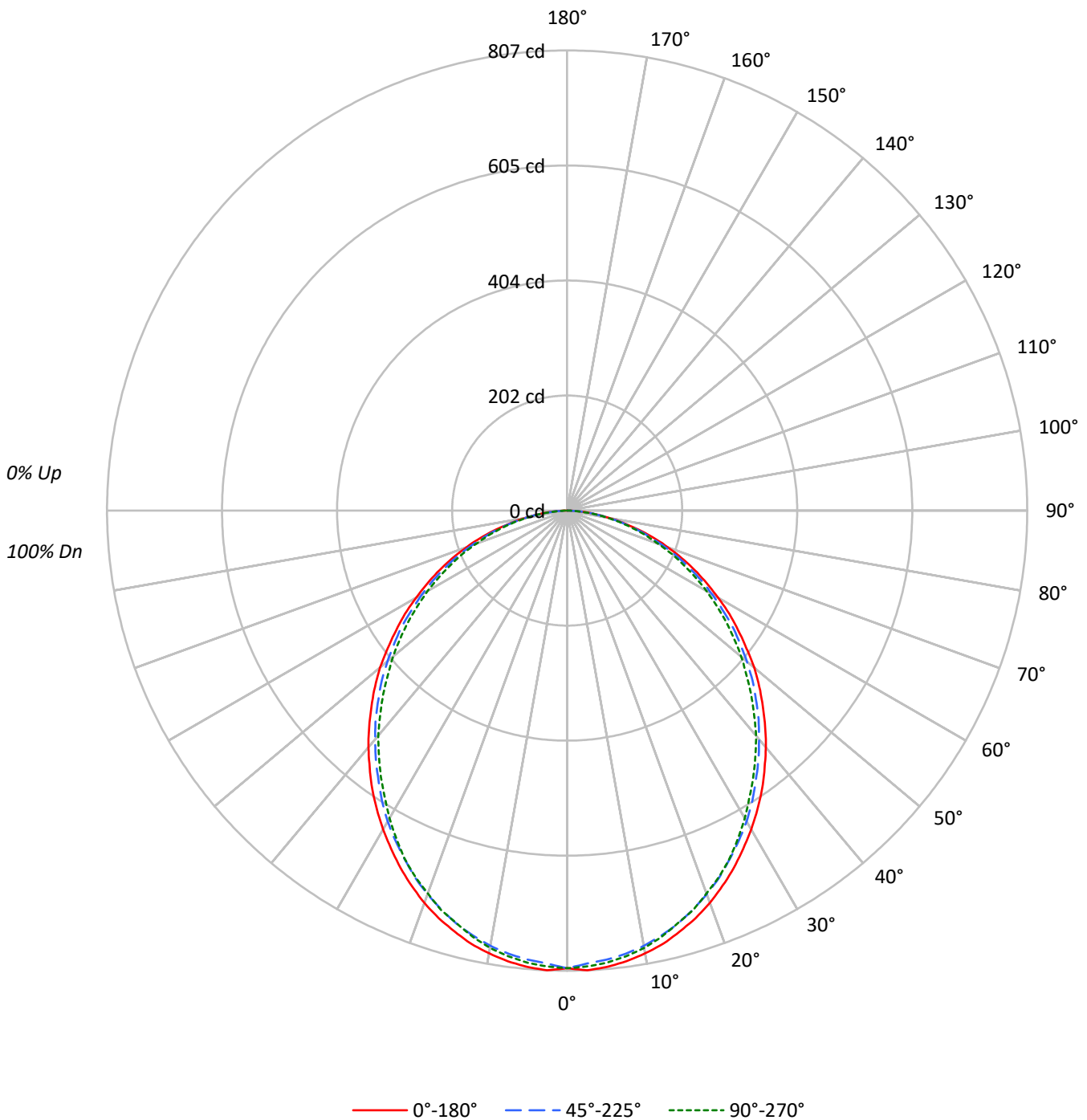
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2042.1 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.6  
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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26					26			

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

	0°	45°	90°
0°	15286	15286	15286
5°	15359	15119	15218
10°	15251	14992	15063
15°	15068	14790	14776
20°	14842	14513	14483
25°	14535	14178	14161
30°	14202	13843	13698
35°	13863	13415	13243
40°	13482	13022	12818
45°	13070	12612	12294
50°	12692	12185	11815
55°	12158	11743	11298
60°	11638	11185	10762
65°	11132	10601	10136
70°	10464	9930	9434
75°	9523	9148	8706
80°	8271	8029	7711
85°	7103	6294	5813

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13070 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	3.7
10°-20°	212.7	10.4
20°-30°	312.7	15.3
30°-40°	363.1	17.8
40°-50°	362.6	17.8
50°-60°	315.8	15.5
60°-70°	233.6	11.4
70°-80°	131.7	6.4
80°-90°	34.3	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	601.0	29.4
0°-40°	964.1	47.2
0°-60°	1642.5	80.4
0°-90°	2042.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2042.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	802	802	802	802	802	
5°	803	800	791	797	796	76
15°	764	760	750	753	749	215
25°	692	686	675	674	674	318
35°	596	590	577	572	570	373
45°	485	480	468	461	456	375
55°	366	363	354	344	340	328
65°	247	243	235	228	225	244
75°	129	129	124	120	118	138
85°	32	31	29	27	27	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	802.5	802.5	802.5	802.5	802.5
2.5°	807.0	803.3	795.1	801.8	800.3
5°	803.3	799.6	790.7	797.3	795.9
7.5°	797.3	793.6	784.0	790.7	788.5
10°	788.5	784.0	775.1	779.6	778.8
12.5°	778.1	773.7	763.3	767.0	765.5
15°	764.1	760.4	750.0	753.0	749.3
17.5°	749.3	743.3	733.7	736.7	734.5
20°	732.2	726.3	716.0	717.5	714.5
22.5°	712.3	706.4	696.7	696.7	695.3
25°	691.6	685.7	674.6	673.8	673.8
27.5°	668.6	663.5	652.4	650.1	648.7
30°	645.7	641.3	629.4	625.0	622.8
32.5°	621.3	615.4	604.3	599.1	595.4
35°	596.2	589.5	576.9	571.7	569.5
37.5°	568.8	562.1	551.0	546.6	542.2
40°	542.2	536.2	523.7	517.0	515.5
42.5°	514.1	508.1	497.0	489.6	485.2
45°	485.2	480.0	468.2	460.8	456.4
47.5°	457.1	451.2	440.8	432.0	426.0
50°	428.3	422.3	411.2	400.9	398.7
52.5°	396.4	392.8	381.7	372.0	369.1
55°	366.1	363.2	353.6	343.9	340.2
57.5°	337.3	333.6	322.5	315.1	310.7
60°	305.5	303.3	293.6	285.5	282.5
62.5°	275.9	272.9	264.8	256.7	253.0
65°	247.0	243.3	235.2	227.8	224.9
67.5°	217.5	213.8	207.1	201.2	198.2
70°	187.9	184.9	178.3	173.1	169.4
72.5°	159.0	156.1	150.1	145.0	144.2
75°	129.4	128.7	124.3	119.8	118.3
77.5°	102.1	101.3	98.4	96.2	94.7
80°	75.4	75.4	73.2	71.0	70.3
82.5°	51.8	52.5	50.3	48.8	48.8
85°	32.5	31.1	28.8	27.4	26.6
87.5°	13.3	11.1	10.4	8.1	7.4
90°	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	20.76	22.37	21.12	22.68	23.00	20.33	21.94	20.70	22.25	22.57
	3H	22.51	23.97	22.89	24.29	24.65	22.03	23.49	22.41	23.81	24.17
	4H	23.16	24.53	23.56	24.87	25.25	22.66	24.03	23.06	24.37	24.75
	6H	23.62	24.88	24.03	25.25	25.64	23.12	24.39	23.53	24.75	25.14
	8H	23.75	24.96	24.18	25.35	25.75	23.26	24.47	23.68	24.86	25.26
	12H	23.85	25.01	24.28	25.39	25.82	23.34	24.50	23.77	24.88	25.31
4H	2H	21.32	22.69	21.72	23.03	23.41	20.98	22.35	21.38	22.69	23.07
	3H	23.29	24.44	23.70	24.84	25.24	22.89	24.04	23.30	24.44	24.84
	4H	24.07	25.11	24.51	25.52	25.96	23.64	24.68	24.07	25.09	25.53
	6H	24.66	25.56	25.11	26.00	26.46	24.22	25.13	24.68	25.57	26.03
	8H	24.84	25.69	25.30	26.13	26.60	24.41	25.25	24.87	25.70	26.16
	12H	24.98	25.74	25.46	26.21	26.68	24.52	25.28	25.00	25.76	26.23
8H	4H	24.35	25.19	24.81	25.63	26.10	23.96	24.81	24.42	25.25	25.72
	6H	25.05	25.75	25.54	26.24	26.71	24.66	25.36	25.15	25.85	26.33
	8H	25.30	25.93	25.81	26.44	26.92	24.91	25.54	25.42	26.04	26.53
	12H	25.50	26.06	26.01	26.55	27.11	25.09	25.64	25.59	26.13	26.69
12H	4H	24.37	25.13	24.85	25.60	26.07	24.00	24.76	24.48	25.23	25.70
	6H	25.09	25.72	25.60	26.23	26.71	24.71	25.35	25.22	25.85	26.34
	8H	25.40	25.95	25.90	26.44	27.01	25.02	25.57	25.52	26.07	26.63