

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: P243117

Luminaire Tested: S122DRP-H675D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243117  
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-H675D830-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

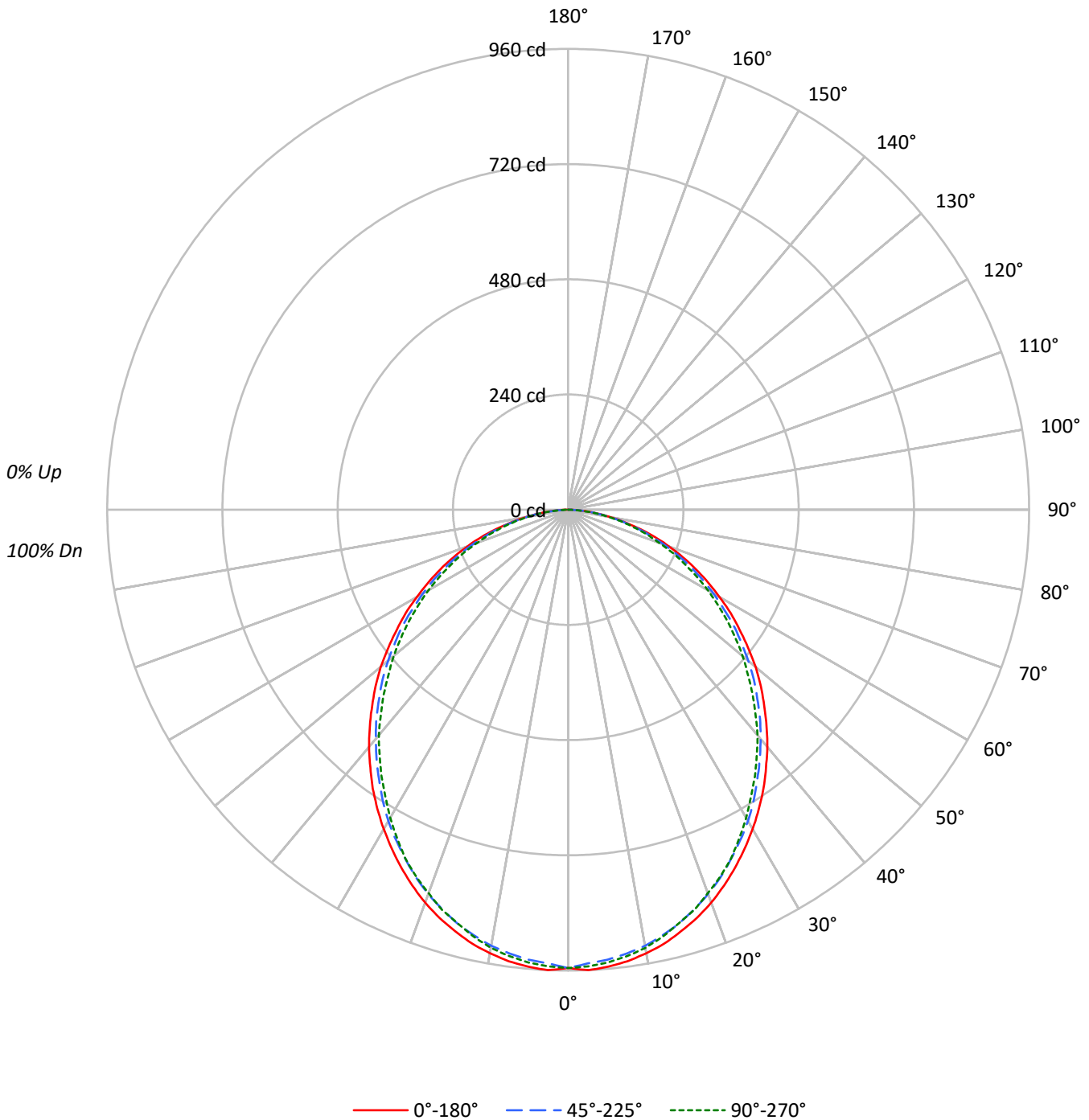
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2429.7 lumens  
Efficiency: N/A  
Efficacy: 103.0 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°	18187	18187	18187
5°	18273	17989	18105
10°	18144	17839	17924
15°	17927	17598	17580
20°	17659	17268	17232
25°	17293	16868	16849
30°	16898	16472	16298
35°	16493	15961	15756
40°	16040	15493	15252
45°	15551	15007	14627
50°	15098	14499	14055
55°	14466	13971	13443
60°	13848	13311	12808
65°	13246	12615	12056
70°	12447	11812	11222
75°	11334	10877	10362
80°	9850	9554	9170
85°	8458	7496	6928

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15551 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.9	3.7
10°-20°	253.1	10.4
20°-30°	372.1	15.3
30°-40°	432.0	17.8
40°-50°	431.4	17.8
50°-60°	375.8	15.5
60°-70°	277.9	11.4
70°-80°	156.6	6.4
80°-90°	40.9	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°	715.0	29.4
0°-40°	1147.1	47.2
0°-60°	1954.3	80.4
0°-90°	2429.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2429.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	955	955	955	955	955	
5°	956	951	941	949	947	91
15°	909	905	892	896	892	256
25°	823	816	803	802	802	379
35°	709	701	686	680	678	443
45°	577	571	557	548	543	446
55°	436	432	421	409	405	390
65°	294	290	280	271	268	291
75°	154	153	148	143	141	164
85°	39	37	34	33	32	44
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	954.8	954.8	954.8	954.8	954.8
2.5°	960.1	955.7	946.0	954.0	952.2
5°	955.7	951.3	940.8	948.7	946.9
7.5°	948.7	944.3	932.8	940.8	938.1
10°	938.1	932.8	922.3	927.6	926.7
12.5°	925.8	920.5	908.2	912.6	910.8
15°	909.1	904.7	892.4	895.9	891.5
17.5°	891.5	884.4	873.0	876.5	873.9
20°	871.2	864.2	851.9	853.6	850.1
22.5°	847.5	840.4	829.0	829.0	827.2
25°	822.8	815.8	802.6	801.7	801.7
27.5°	795.6	789.4	776.2	773.5	771.8
30°	768.3	763.0	748.9	743.6	741.0
32.5°	739.2	732.2	719.0	712.8	708.4
35°	709.3	701.4	686.4	680.3	677.6
37.5°	676.7	668.8	655.6	650.3	645.1
40°	645.1	638.0	623.1	615.1	613.4
42.5°	611.6	604.6	591.4	582.6	577.3
45°	577.3	571.1	557.1	548.3	543.0
47.5°	543.9	536.8	524.5	513.9	506.9
50°	509.5	502.5	489.3	477.0	474.3
52.5°	471.7	467.3	454.1	442.7	439.1
55°	435.6	432.1	420.7	409.2	404.8
57.5°	401.3	396.9	383.7	374.9	369.6
60°	363.5	360.8	349.4	339.7	336.2
62.5°	328.3	324.7	315.1	305.4	301.0
65°	293.9	289.5	279.9	271.1	267.5
67.5°	258.7	254.3	246.4	239.4	235.8
70°	223.5	220.0	212.1	205.9	201.5
72.5°	189.2	185.7	178.6	172.5	171.6
75°	154.0	153.1	147.8	142.6	140.8
77.5°	121.4	120.6	117.0	114.4	112.6
80°	89.8	89.8	87.1	84.5	83.6
82.5°	61.6	62.5	59.8	58.1	58.1
85°	38.7	37.0	34.3	32.6	31.7
87.5°	15.8	13.2	12.3	9.7	8.8
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	21.36	22.97	21.73	23.29	23.60	20.93	22.54	21.30	22.86	23.17
	3H	23.12	24.57	23.49	24.90	25.26	22.63	24.09	23.01	24.42	24.78
	4H	23.76	25.13	24.16	25.48	25.85	23.26	24.63	23.66	24.98	25.35
	6H	24.22	25.49	24.63	25.85	26.24	23.72	24.99	24.13	25.35	25.74
	8H	24.36	25.57	24.78	25.96	26.36	23.86	25.07	24.29	25.46	25.86
	12H	24.45	25.61	24.88	25.99	26.42	23.94	25.10	24.37	25.48	25.91
4H	2H	21.92	23.29	22.32	23.64	24.01	21.58	22.95	21.98	23.30	23.67
	3H	23.90	25.04	24.31	25.44	25.84	23.50	24.64	23.91	25.04	25.44
	4H	24.68	25.71	25.11	26.13	26.56	24.25	25.28	24.68	25.69	26.13
	6H	25.26	26.17	25.72	26.61	27.06	24.83	25.73	25.28	26.17	26.63
	8H	25.45	26.29	25.91	26.74	27.20	25.01	25.86	25.47	26.30	26.76
	12H	25.58	26.34	26.06	26.82	27.29	25.13	25.89	25.61	26.36	26.83
8H	4H	24.95	25.79	25.41	26.24	26.70	24.57	25.41	25.03	25.85	26.32
	6H	25.65	26.35	26.14	26.84	27.32	25.26	25.96	25.76	26.45	26.93
	8H	25.90	26.53	26.41	27.04	27.53	25.51	26.14	26.02	26.65	27.13
	12H	26.11	26.67	26.62	27.16	27.72	25.69	26.25	26.20	26.74	27.30
12H	4H	24.97	25.73	25.45	26.21	26.68	24.60	25.36	25.08	25.84	26.31
	6H	25.69	26.32	26.20	26.83	27.32	25.32	25.95	25.83	26.46	26.94
	8H	26.00	26.56	26.51	27.05	27.61	25.62	26.18	26.13	26.67	27.23