

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: P242369

Luminaire Tested: S122RDRP-S675D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242369  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S675D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

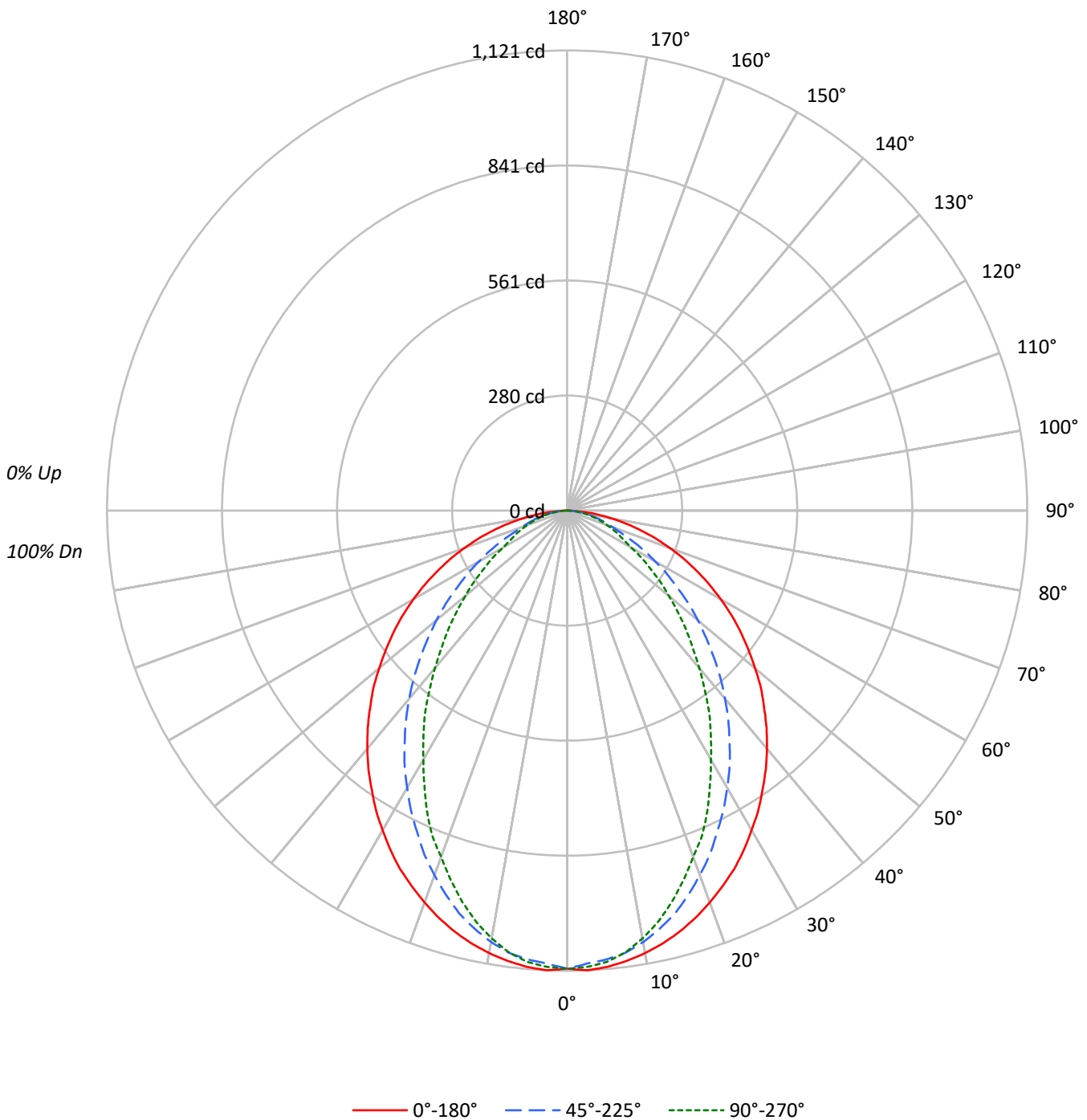
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2295.0 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.3  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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

	0°	45°	90°
0°	21255	21255	21255
5°	21337	20989	21105
10°	21173	20645	20469
15°	20930	20033	19455
20°	20592	19159	18199
25°	20248	18167	16979
30°	19769	17147	15414
35°	19302	16038	14042
40°	18833	14889	12455
45°	18280	13601	11017
50°	17715	12301	9607
55°	17136	10899	8249
60°	16465	9425	6850
65°	15703	7919	6238
70°	14792	6522	5736
75°	13674	5946	5350
80°	12077	5320	4870
85°	9485	4196	4196

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18280 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.6	4.6
10°-20°	287.1	12.5
20°-30°	403.1	17.6
30°-40°	439.4	19.1
40°-50°	403.8	17.6
50°-60°	317.1	13.8
60°-70°	206.4	9.0
70°-80°	106.3	4.6
80°-90°	27.1	1.2
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°	794.8	34.6
0°-40°	1234.1	53.8
0°-60°	1955.1	85.2
0°-90°	2295.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2295.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1116	1111	1098	1107	1104	106
15°	1061	1050	1016	997	987	299
25°	963	931	864	823	808	443
35°	830	779	690	626	604	520
45°	679	611	505	433	409	524
55°	516	437	328	268	248	461
65°	348	267	176	141	138	345
75°	186	115	81	74	73	196
85°	43	22	19	19	19	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1115.9	1115.9	1115.9	1115.9	1115.9
2.5°	1120.9	1115.9	1104.8	1114.9	1112.9
5°	1115.9	1110.8	1097.7	1106.8	1103.8
7.5°	1106.8	1100.8	1086.6	1090.7	1085.6
10°	1094.7	1087.6	1067.4	1064.4	1058.3
12.5°	1079.5	1070.5	1043.2	1037.1	1026.0
15°	1061.4	1050.3	1015.9	996.7	986.6
17.5°	1040.2	1024.0	981.6	959.4	943.2
20°	1015.9	995.7	945.2	920.0	897.8
22.5°	989.7	966.4	907.9	873.5	858.4
25°	963.4	931.1	864.4	823.0	807.9
27.5°	932.1	897.8	824.0	776.6	753.4
30°	898.8	860.4	779.6	728.1	700.8
32.5°	866.5	820.0	737.2	676.6	651.4
35°	830.1	778.6	689.7	626.1	603.9
37.5°	794.8	739.2	645.3	575.6	550.4
40°	757.4	696.8	598.8	527.1	500.9
42.5°	719.0	654.4	552.4	477.7	452.4
45°	678.6	611.0	504.9	433.2	409.0
47.5°	640.3	568.6	459.5	387.8	365.6
50°	597.8	526.1	415.1	345.4	324.2
52.5°	556.4	480.7	372.6	306.0	286.8
55°	516.0	437.3	328.2	267.6	248.4
57.5°	474.6	393.8	288.8	232.3	216.1
60°	432.2	351.4	247.4	195.9	179.8
62.5°	390.8	310.0	212.1	163.6	155.5
65°	348.4	266.6	175.7	141.4	138.4
67.5°	308.0	226.2	141.4	124.2	121.2
70°	265.6	186.8	117.1	107.0	103.0
72.5°	225.2	150.5	98.0	89.9	87.9
75°	185.8	115.1	80.8	73.7	72.7
77.5°	146.4	81.8	63.6	59.6	57.6
80°	110.1	58.6	48.5	44.4	44.4
82.5°	76.7	39.4	33.3	31.3	31.3
85°	43.4	22.2	19.2	19.2	19.2
87.5°	16.2	8.1	8.1	7.1	7.1
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	21.85	23.38	22.22	23.69	24.00	17.82	19.34	18.18	19.65	19.96
	3H	23.62	24.98	24.00	25.31	25.67	19.08	20.45	19.46	20.77	21.14
	4H	24.29	25.57	24.69	25.91	26.29	19.58	20.86	19.98	21.21	21.59
	6H	24.77	25.96	25.19	26.32	26.72	19.96	21.15	20.38	21.51	21.90
	8H	24.94	26.07	25.37	26.46	26.86	20.09	21.21	20.51	21.60	22.00
	12H	25.04	26.12	25.47	26.50	26.93	20.17	21.25	20.60	21.63	22.06
4H	2H	21.96	23.24	22.36	23.59	23.97	18.51	19.79	18.91	20.14	20.52
	3H	23.89	24.95	24.30	25.35	25.75	19.95	21.02	20.36	21.42	21.82
	4H	24.64	25.60	25.07	26.01	26.45	20.55	21.51	20.99	21.93	22.36
	6H	25.23	26.06	25.69	26.51	26.97	21.04	21.87	21.50	22.32	22.78
	8H	25.45	26.22	25.91	26.67	27.14	21.20	21.98	21.67	22.42	22.89
	12H	25.60	26.30	26.08	26.77	27.24	21.32	22.01	21.80	22.49	22.96
8H	4H	24.66	25.44	25.13	25.89	26.35	20.91	21.68	21.37	22.13	22.60
	6H	25.30	25.95	25.80	26.44	26.91	21.49	22.14	21.99	22.63	23.10
	8H	25.55	26.13	26.07	26.64	27.13	21.71	22.29	22.23	22.80	23.29
	12H	25.76	26.27	26.27	26.76	27.32	21.89	22.40	22.40	22.90	23.46
12H	4H	24.65	25.34	25.13	25.82	26.29	20.95	21.64	21.43	22.12	22.59
	6H	25.28	25.86	25.80	26.37	26.86	21.56	22.13	22.07	22.64	23.13
	8H	25.57	26.08	26.08	26.57	27.13	21.83	22.34	22.34	22.83	23.40