

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: P242266

Luminaire Tested: S122DRP-S675D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242266  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S675D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

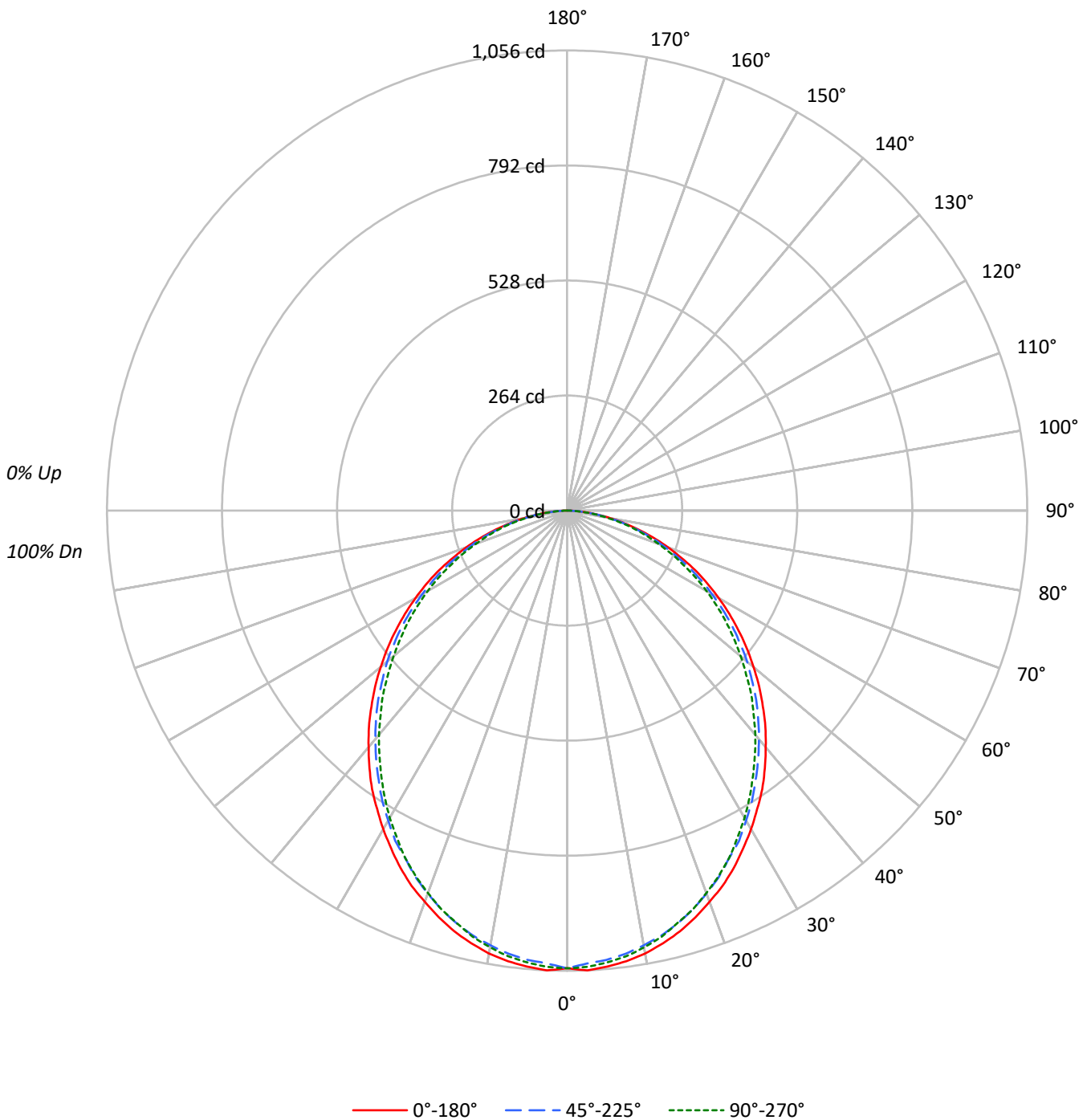
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2672.0 lumens  
Efficiency: N/A  
Efficacy: 101.6 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): 26.3  
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																		
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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71																												
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60																												
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51																												
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39																												
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35																												
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26																												

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

	0°	45°	90°
0°	20006	20006	20006
5°	20082	19792	19908
10°	19962	19591	19688
15°	19716	19337	19317
20°	19364	18955	18934
25°	19016	18486	18486
30°	18568	18057	17903
35°	18151	17542	17284
40°	17627	17025	16699
45°	17111	16513	16103
50°	16550	15981	15412
55°	15963	15359	14791
60°	15311	14617	14080
65°	14612	13882	13246
70°	13722	12993	12375
75°	12489	11966	11665
80°	11079	10750	10190
85°	9048	8611	7715

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17111 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.8	3.7
10°-20°	278.1	10.4
20°-30°	408.7	15.3
30°-40°	474.7	17.8
40°-50°	474.1	17.7
50°-60°	413.4	15.5
60°-70°	305.6	11.4
70°-80°	172.9	6.5
80°-90°	45.6	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°	785.7	29.4
0°-40°	1260.4	47.2
0°-60°	2147.9	80.4
0°-90°	2672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2672.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1050	1050	1050	1050	1050	
5°	1050	1046	1035	1043	1041	100
15°	1000	994	981	985	980	282
25°	905	897	880	882	880	416
35°	781	770	754	748	743	487
45°	635	628	613	602	598	490
55°	481	475	462	450	445	430
65°	324	318	308	299	294	321
75°	170	168	163	156	158	181
85°	41	40	39	36	35	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1050.3	1050.3	1050.3	1050.3	1050.3
2.5°	1056.3	1051.3	1040.2	1050.3	1048.2
5°	1050.3	1046.2	1035.1	1043.2	1041.2
7.5°	1043.2	1037.1	1026.0	1034.1	1032.1
10°	1032.1	1025.0	1012.9	1021.0	1017.9
12.5°	1016.9	1010.9	998.8	1003.8	1001.8
15°	999.8	993.7	980.6	984.6	979.6
17.5°	978.6	972.5	959.4	964.4	959.4
20°	955.3	949.3	935.1	938.2	934.1
22.5°	932.1	923.0	909.9	909.9	907.9
25°	904.8	896.8	879.6	881.6	879.6
27.5°	874.5	867.5	854.3	851.3	846.3
30°	844.2	836.2	821.0	818.0	814.0
32.5°	811.9	805.9	789.7	783.7	779.6
35°	780.6	770.5	754.4	748.3	743.3
37.5°	745.3	736.2	720.0	713.0	707.9
40°	708.9	700.8	684.7	675.6	671.6
42.5°	673.6	665.5	649.3	639.2	633.2
45°	635.2	628.1	613.0	601.9	597.8
47.5°	597.8	590.8	574.6	563.5	557.4
50°	558.5	553.4	539.3	525.1	520.1
52.5°	520.1	513.0	499.9	488.8	481.7
55°	480.7	474.6	462.5	450.4	445.4
57.5°	441.3	436.3	423.1	411.0	407.0
60°	401.9	397.9	383.7	372.6	369.6
62.5°	363.6	356.5	346.4	336.3	332.2
65°	324.2	318.1	308.0	298.9	293.9
67.5°	283.8	278.7	269.6	262.6	258.5
70°	246.4	242.4	233.3	226.2	222.2
72.5°	208.0	204.0	198.9	191.9	188.8
75°	169.7	167.6	162.6	156.5	158.5
77.5°	135.3	131.3	129.3	126.2	123.2
80°	101.0	100.0	98.0	94.9	92.9
82.5°	68.7	68.7	67.7	63.6	63.6
85°	41.4	40.4	39.4	36.4	35.3
87.5°	18.2	16.2	14.1	11.1	10.1
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	21.69	23.30	22.06	23.62	23.93	21.25	22.86	21.61	23.17	23.49
	3H	23.44	24.90	23.82	25.22	25.58	22.95	24.41	23.33	24.73	25.09
	4H	24.09	25.46	24.49	25.80	26.18	23.59	24.96	23.99	25.31	25.69
	6H	24.56	25.83	24.97	26.19	26.58	24.06	25.32	24.47	25.69	26.08
	8H	24.70	25.91	25.12	26.30	26.70	24.20	25.41	24.62	25.80	26.20
	12H	24.79	25.95	25.22	26.33	26.76	24.28	25.44	24.71	25.82	26.25
4H	2H	22.25	23.62	22.65	23.97	24.34	21.90	23.27	22.30	23.62	23.99
	3H	24.23	25.37	24.64	25.77	26.17	23.82	24.97	24.23	25.36	25.76
	4H	25.00	26.04	25.43	26.45	26.89	24.58	25.62	25.01	26.03	26.47
	6H	25.60	26.50	26.05	26.95	27.40	25.17	26.07	25.62	26.51	26.97
	8H	25.79	26.64	26.25	27.08	27.54	25.35	26.20	25.81	26.64	27.11
	12H	25.92	26.68	26.40	27.16	27.63	25.47	26.23	25.95	26.70	27.17
8H	4H	25.28	26.12	25.74	26.57	27.03	24.90	25.75	25.36	26.19	26.66
	6H	25.99	26.69	26.49	27.18	27.66	25.61	26.31	26.10	26.80	27.28
	8H	26.25	26.88	26.76	27.39	27.87	25.86	26.49	26.37	27.00	27.48
	12H	26.45	27.01	26.96	27.50	28.06	26.04	26.59	26.54	27.08	27.65
12H	4H	25.30	26.06	25.78	26.54	27.01	24.94	25.70	25.42	26.17	26.64
	6H	26.04	26.67	26.55	27.18	27.66	25.67	26.30	26.18	26.81	27.29
	8H	26.35	26.91	26.86	27.40	27.96	25.97	26.53	26.48	27.02	27.58