

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: P242281

Luminaire Tested: S122DRP-S675D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242281  
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-S675D940-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

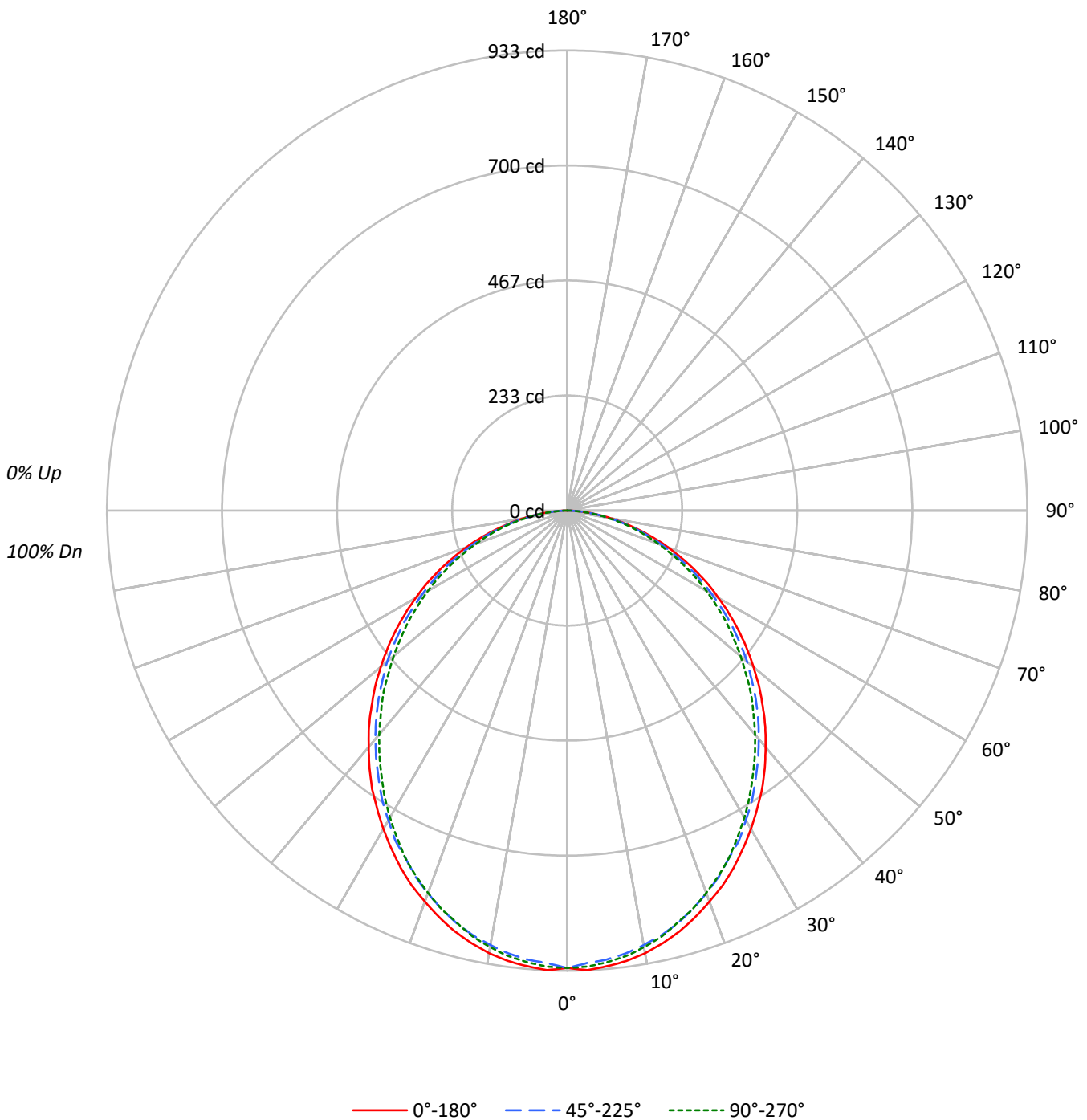
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2359.4 lumens  
Efficiency: N/A  
Efficacy: 89.7 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 (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

TEST NUMBER: P242281

CATALOG NUMBER: S122DRP-S675D940-X4F0-XX-UDD-F-W

### 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	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°	17665	17665	17665
5°	17732	17476	17579
10°	17626	17299	17384
15°	17408	17075	17057
20°	17100	16737	16719
25°	16792	16324	16324
30°	16397	15946	15807
35°	16028	15489	15261
40°	15566	15033	14745
45°	15109	14581	14220
50°	14612	14111	13607
55°	14097	13562	13058
60°	13520	12911	12434
65°	12899	12259	11696
70°	12119	11473	10927
75°	11024	10568	10303
80°	9784	9488	8995
85°	7999	7605	6819

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15109 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.3	3.7
10°-20°	245.6	10.4
20°-30°	360.9	15.3
30°-40°	419.2	17.8
40°-50°	418.7	17.7
50°-60°	365.0	15.5
60°-70°	269.8	11.4
70°-80°	152.7	6.5
80°-90°	40.3	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°	693.8	29.4
0°-40°	1112.9	47.2
0°-60°	1896.6	80.4
0°-90°	2359.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2359.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	927	924	914	921	919	88
15°	883	877	866	869	865	249
25°	799	792	777	778	777	368
35°	689	680	666	661	656	430
45°	561	555	541	532	528	433
55°	424	419	408	398	393	380
65°	286	281	272	264	260	283
75°	150	148	144	138	140	160
85°	37	36	35	32	31	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	927.4	927.4	927.4	927.4	927.4
2.5°	932.7	928.3	918.5	927.4	925.6
5°	927.4	923.8	914.0	921.1	919.4
7.5°	921.1	915.8	906.0	913.1	911.3
10°	911.3	905.1	894.4	901.5	898.8
12.5°	898.0	892.6	881.9	886.4	884.6
15°	882.8	877.4	865.9	869.4	865.0
17.5°	864.1	858.7	847.1	851.6	847.1
20°	843.6	838.2	825.7	828.4	824.8
22.5°	823.1	815.0	803.4	803.4	801.6
25°	799.0	791.8	776.7	778.5	776.7
27.5°	772.2	766.0	754.4	751.7	747.3
30°	745.5	738.3	725.0	722.3	718.7
32.5°	716.9	711.6	697.3	692.0	688.4
35°	689.3	680.4	666.1	660.8	656.3
37.5°	658.1	650.1	635.8	629.5	625.1
40°	626.0	618.8	604.6	596.6	593.0
42.5°	594.8	587.6	573.4	564.5	559.1
45°	560.9	554.6	541.3	531.5	527.9
47.5°	527.9	521.7	507.4	497.6	492.2
50°	493.1	488.7	476.2	463.7	459.2
52.5°	459.2	453.0	441.4	431.6	425.3
55°	424.5	419.1	408.4	397.7	393.2
57.5°	389.7	385.2	373.6	362.9	359.4
60°	354.9	351.3	338.9	329.0	326.4
62.5°	321.0	314.8	305.9	296.9	293.4
65°	286.2	280.9	272.0	263.9	259.5
67.5°	250.6	246.1	238.1	231.8	228.3
70°	217.6	214.0	206.0	199.7	196.2
72.5°	183.7	180.1	175.7	169.4	166.8
75°	149.8	148.0	143.6	138.2	140.0
77.5°	119.5	115.9	114.1	111.5	108.8
80°	89.2	88.3	86.5	83.8	82.0
82.5°	60.6	60.6	59.7	56.2	56.2
85°	36.6	35.7	34.8	32.1	31.2
87.5°	16.1	14.3	12.5	9.8	8.9
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	21.26	22.87	21.62	23.18	23.50	20.81	22.43	21.18	22.74	23.05
	3H	23.01	24.46	23.39	24.79	25.15	22.52	23.97	22.89	24.30	24.66
	4H	23.66	25.02	24.05	25.37	25.75	23.16	24.53	23.56	24.88	25.25
	6H	24.12	25.39	24.54	25.76	26.15	23.62	24.89	24.03	25.26	25.65
	8H	24.27	25.48	24.69	25.87	26.27	23.76	24.98	24.19	25.36	25.76
	12H	24.36	25.52	24.79	25.90	26.33	23.85	25.01	24.28	25.39	25.82
4H	2H	21.82	23.19	22.22	23.54	23.91	21.47	22.84	21.87	23.18	23.56
	3H	23.79	24.94	24.20	25.34	25.74	23.39	24.53	23.80	24.93	25.33
	4H	24.57	25.61	25.00	26.02	26.46	24.15	25.18	24.58	25.60	26.03
	6H	25.17	26.07	25.62	26.51	26.97	24.74	25.64	25.19	26.08	26.54
	8H	25.36	26.20	25.82	26.65	27.11	24.92	25.77	25.38	26.21	26.67
	12H	25.49	26.25	25.97	26.72	27.19	25.04	25.80	25.52	26.27	26.74
8H	4H	24.84	25.69	25.31	26.13	26.60	24.47	25.32	24.93	25.76	26.22
	6H	25.56	26.26	26.05	26.75	27.23	25.18	25.88	25.67	26.37	26.84
	8H	25.82	26.45	26.33	26.96	27.44	25.43	26.06	25.94	26.56	27.05
	12H	26.02	26.58	26.52	27.07	27.63	25.60	26.16	26.11	26.65	27.21
12H	4H	24.87	25.63	25.35	26.11	26.58	24.51	25.27	24.99	25.74	26.21
	6H	25.60	26.24	26.11	26.74	27.23	25.24	25.87	25.75	26.37	26.86
	8H	25.92	26.48	26.42	26.97	27.53	25.54	26.10	26.05	26.59	27.15