

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: P242264

Luminaire Tested: S122DRP-S290D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242264
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-S290D840-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

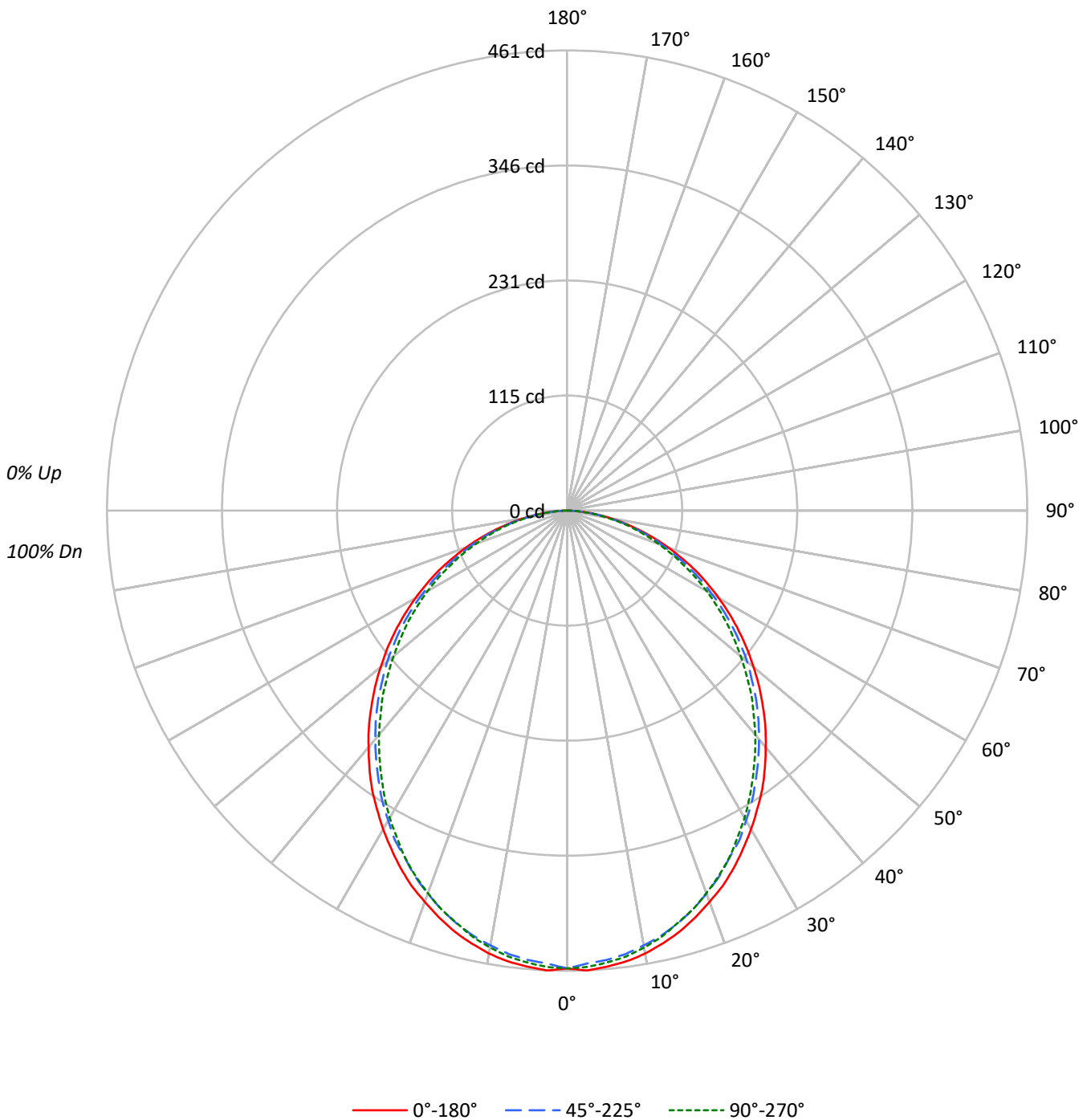
Lumens per Lamp: N/A
Luminaire Lumens: 1166.7 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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																		
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°	8735	8735	8735
5°	8769	8642	8692
10°	8715	8555	8597
15°	8608	8442	8434
20°	8455	8276	8268
25°	8304	8073	8073
30°	8107	7885	7817
35°	7925	7660	7546
40°	7696	7435	7290
45°	7470	7208	7031
50°	7225	6979	6730
55°	6970	6705	6459
60°	6686	6385	6149
65°	6378	6062	5783
70°	5992	5675	5402
75°	5453	5225	5093
80°	4837	4695	4453
85°	3956	3759	3366

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7470 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.2	3.7
10°-20°	121.4	10.4
20°-30°	178.5	15.3
30°-40°	207.3	17.8
40°-50°	207.0	17.7
50°-60°	180.5	15.5
60°-70°	133.4	11.4
70°-80°	75.5	6.5
80°-90°	19.9	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°	343.1	29.4
0°-40°	550.3	47.2
0°-60°	937.8	80.4
0°-90°	1166.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1166.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	459	459	459	459	459	
5°	459	457	452	456	455	44
15°	436	434	428	430	428	123
25°	395	392	384	385	384	182
35°	341	336	329	327	324	213
45°	277	274	268	263	261	214
55°	210	207	202	197	194	188
65°	142	139	134	130	128	140
75°	74	73	71	68	69	79
85°	18	18	17	16	15	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	458.6	458.6	458.6	458.6	458.6
2.5°	461.2	459.0	454.2	458.6	457.7
5°	458.6	456.8	452.0	455.5	454.6
7.5°	455.5	452.8	448.0	451.5	450.6
10°	450.6	447.5	442.3	445.8	444.5
12.5°	444.0	441.4	436.1	438.3	437.4
15°	436.5	433.9	428.1	429.9	427.7
17.5°	427.3	424.6	418.9	421.1	418.9
20°	417.1	414.5	408.3	409.6	407.9
22.5°	407.0	403.0	397.3	397.3	396.4
25°	395.1	391.5	384.1	384.9	384.1
27.5°	381.8	378.8	373.0	371.7	369.5
30°	368.6	365.1	358.5	357.2	355.4
32.5°	354.5	351.9	344.8	342.2	340.4
35°	340.8	336.4	329.4	326.7	324.5
37.5°	325.4	321.4	314.4	311.3	309.1
40°	309.5	306.0	299.0	295.0	293.2
42.5°	294.1	290.6	283.5	279.1	276.5
45°	277.3	274.3	267.6	262.8	261.0
47.5°	261.0	257.9	250.9	246.0	243.4
50°	243.8	241.6	235.5	229.3	227.1
52.5°	227.1	224.0	218.3	213.4	210.3
55°	209.9	207.2	201.9	196.7	194.5
57.5°	192.7	190.5	184.8	179.5	177.7
60°	175.5	173.7	167.6	162.7	161.4
62.5°	158.7	155.6	151.2	146.8	145.1
65°	141.5	138.9	134.5	130.5	128.3
67.5°	123.9	121.7	117.7	114.6	112.9
70°	107.6	105.8	101.9	98.8	97.0
72.5°	90.8	89.1	86.9	83.8	82.5
75°	74.1	73.2	71.0	68.3	69.2
77.5°	59.1	57.3	56.4	55.1	53.8
80°	44.1	43.7	42.8	41.4	40.6
82.5°	30.0	30.0	29.5	27.8	27.8
85°	18.1	17.6	17.2	15.9	15.4
87.5°	7.9	7.1	6.2	4.9	4.4
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	18.81	20.42	19.18	20.74	21.05	18.37	19.98	18.73	20.29	20.61
	3H	20.56	22.02	20.94	22.34	22.70	20.07	21.53	20.45	21.85	22.21
	4H	21.21	22.58	21.61	22.93	23.30	20.71	22.08	21.11	22.43	22.81
	6H	21.68	22.95	22.09	23.31	23.70	21.18	22.45	21.59	22.81	23.20
	8H	21.82	23.03	22.25	23.42	23.82	21.32	22.53	21.74	22.92	23.32
	12H	21.91	23.07	22.34	23.45	23.88	21.40	22.56	21.83	22.94	23.37
4H	2H	19.37	20.74	19.77	21.09	21.47	19.02	20.39	19.42	20.74	21.11
	3H	21.35	22.49	21.76	22.89	23.29	20.94	22.09	21.35	22.49	22.89
	4H	22.12	23.16	22.56	23.57	24.01	21.70	22.74	22.13	23.15	23.59
	6H	22.72	23.63	23.18	24.07	24.52	22.29	23.19	22.74	23.63	24.09
	8H	22.91	23.76	23.37	24.20	24.67	22.47	23.32	22.93	23.76	24.23
	12H	23.04	23.80	23.52	24.28	24.75	22.59	23.35	23.07	23.83	24.30
8H	4H	22.40	23.24	22.86	23.69	24.15	22.02	22.87	22.48	23.31	23.78
	6H	23.11	23.82	23.61	24.30	24.78	22.73	23.43	23.22	23.92	24.40
	8H	23.37	24.00	23.88	24.51	25.00	22.98	23.61	23.49	24.12	24.60
	12H	23.57	24.13	24.08	24.62	25.18	23.16	23.72	23.67	24.21	24.77
12H	4H	22.42	23.18	22.90	23.66	24.13	22.06	22.82	22.54	23.30	23.76
	6H	23.16	23.79	23.67	24.30	24.78	22.79	23.42	23.30	23.93	24.41
	8H	23.47	24.03	23.98	24.52	25.08	23.09	23.65	23.60	24.14	24.70