

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: P243110

Luminaire Tested: S122DRP-H290D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243110
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-H290D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

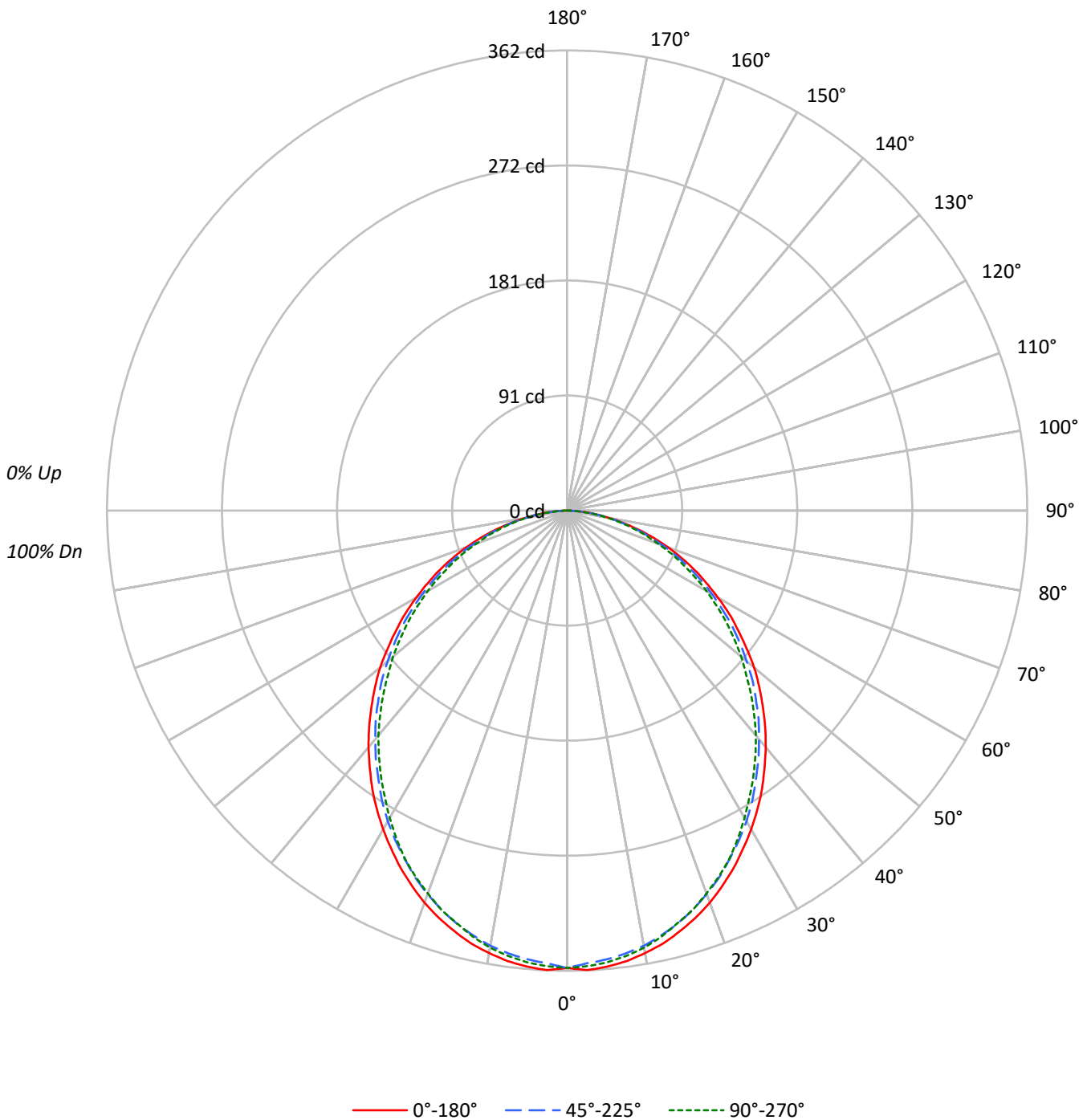
Lumens per Lamp: N/A
Luminaire Lumens: 915.6 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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	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°	6853	6853	6853
5°	6887	6778	6822
10°	6837	6723	6754
15°	6756	6632	6624
20°	6655	6507	6495
25°	6517	6355	6349
30°	6367	6207	6141
35°	6216	6016	5939
40°	6045	5838	5746
45°	5862	5654	5511
50°	5690	5464	5295
55°	5453	5264	5068
60°	5219	5017	4827
65°	4994	4755	4543
70°	4689	4450	4227
75°	4268	4099	3908
80°	3708	3598	3455
85°	3191	2819	2601

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5862 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.9	3.7
10°-20°	95.4	10.4
20°-30°	140.2	15.3
30°-40°	162.8	17.8
40°-50°	162.6	17.8
50°-60°	141.6	15.5
60°-70°	104.7	11.4
70°-80°	59.0	6.4
80°-90°	15.4	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°	269.5	29.4
0°-40°	432.3	47.2
0°-60°	736.4	80.4
0°-90°	915.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	915.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	360	360	360	360	360	
5°	360	358	354	358	357	34
15°	343	341	336	338	336	97
25°	310	307	302	302	302	143
35°	267	264	259	256	255	167
45°	218	215	210	207	205	168
55°	164	163	158	154	153	147
65°	111	109	106	102	101	110
75°	58	58	56	54	53	62
85°	15	14	13	12	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	359.8	359.8	359.8	359.8	359.8
2.5°	361.8	360.2	356.5	359.5	358.8
5°	360.2	358.5	354.5	357.5	356.8
7.5°	357.5	355.8	351.5	354.5	353.5
10°	353.5	351.5	347.6	349.5	349.2
12.5°	348.9	346.9	342.2	343.9	343.2
15°	342.6	340.9	336.3	337.6	335.9
17.5°	335.9	333.3	329.0	330.3	329.3
20°	328.3	325.7	321.0	321.7	320.4
22.5°	319.4	316.7	312.4	312.4	311.7
25°	310.1	307.4	302.4	302.1	302.1
27.5°	299.8	297.5	292.5	291.5	290.8
30°	289.5	287.5	282.2	280.2	279.2
32.5°	278.6	275.9	270.9	268.6	267.0
35°	267.3	264.3	258.7	256.4	255.4
37.5°	255.0	252.0	247.1	245.1	243.1
40°	243.1	240.4	234.8	231.8	231.1
42.5°	230.5	227.8	222.9	219.5	217.6
45°	217.6	215.2	209.9	206.6	204.6
47.5°	204.9	202.3	197.7	193.7	191.0
50°	192.0	189.4	184.4	179.7	178.7
52.5°	177.8	176.1	171.1	166.8	165.5
55°	164.2	162.8	158.5	154.2	152.6
57.5°	151.2	149.6	144.6	141.3	139.3
60°	137.0	136.0	131.7	128.0	126.7
62.5°	123.7	122.4	118.7	115.1	113.4
65°	110.8	109.1	105.5	102.1	100.8
67.5°	97.5	95.8	92.9	90.2	88.9
70°	84.2	82.9	79.9	77.6	75.9
72.5°	71.3	70.0	67.3	65.0	64.7
75°	58.0	57.7	55.7	53.7	53.1
77.5°	45.8	45.4	44.1	43.1	42.4
80°	33.8	33.8	32.8	31.8	31.5
82.5°	23.2	23.5	22.6	21.9	21.9
85°	14.6	13.9	12.9	12.3	11.9
87.5°	6.0	5.0	4.6	3.6	3.3
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	17.97	19.58	18.34	19.90	20.21	17.54	19.15	17.91	19.47	19.78
	3H	19.73	21.18	20.10	21.51	21.87	19.24	20.70	19.62	21.03	21.39
	4H	20.37	21.74	20.77	22.09	22.46	19.87	21.24	20.27	21.59	21.96
	6H	20.83	22.10	21.24	22.46	22.85	20.33	21.60	20.74	21.96	22.35
	8H	20.97	22.18	21.39	22.57	22.97	20.47	21.68	20.90	22.07	22.47
	12H	21.06	22.22	21.49	22.60	23.03	20.55	21.71	20.98	22.09	22.52
4H	2H	18.53	19.90	18.93	20.25	20.63	18.19	19.56	18.59	19.91	20.28
	3H	20.51	21.65	20.92	22.05	22.45	20.11	21.25	20.52	21.65	22.05
	4H	21.29	22.32	21.72	22.74	23.17	20.86	21.89	21.29	22.30	22.74
	6H	21.87	22.78	22.33	23.22	23.67	21.44	22.34	21.89	22.78	23.24
	8H	22.06	22.90	22.52	23.34	23.81	21.62	22.47	22.08	22.91	23.37
	12H	22.19	22.95	22.67	23.43	23.90	21.74	22.50	22.22	22.97	23.44
8H	4H	21.56	22.40	22.02	22.85	23.31	21.18	22.02	21.64	22.46	22.93
	6H	22.26	22.96	22.75	23.45	23.92	21.87	22.57	22.37	23.06	23.54
	8H	22.51	23.14	23.02	23.65	24.14	22.12	22.75	22.63	23.26	23.74
	12H	22.72	23.27	23.22	23.76	24.33	22.30	22.85	22.80	23.35	23.91
12H	4H	21.58	22.34	22.06	22.82	23.29	21.21	21.97	21.69	22.45	22.91
	6H	22.30	22.93	22.81	23.44	23.92	21.93	22.56	22.44	23.06	23.55
	8H	22.61	23.17	23.12	23.66	24.22	22.23	22.79	22.74	23.28	23.84