

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: P243183

Luminaire Tested: S122DRP-H1005D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243183
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H1005D927-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

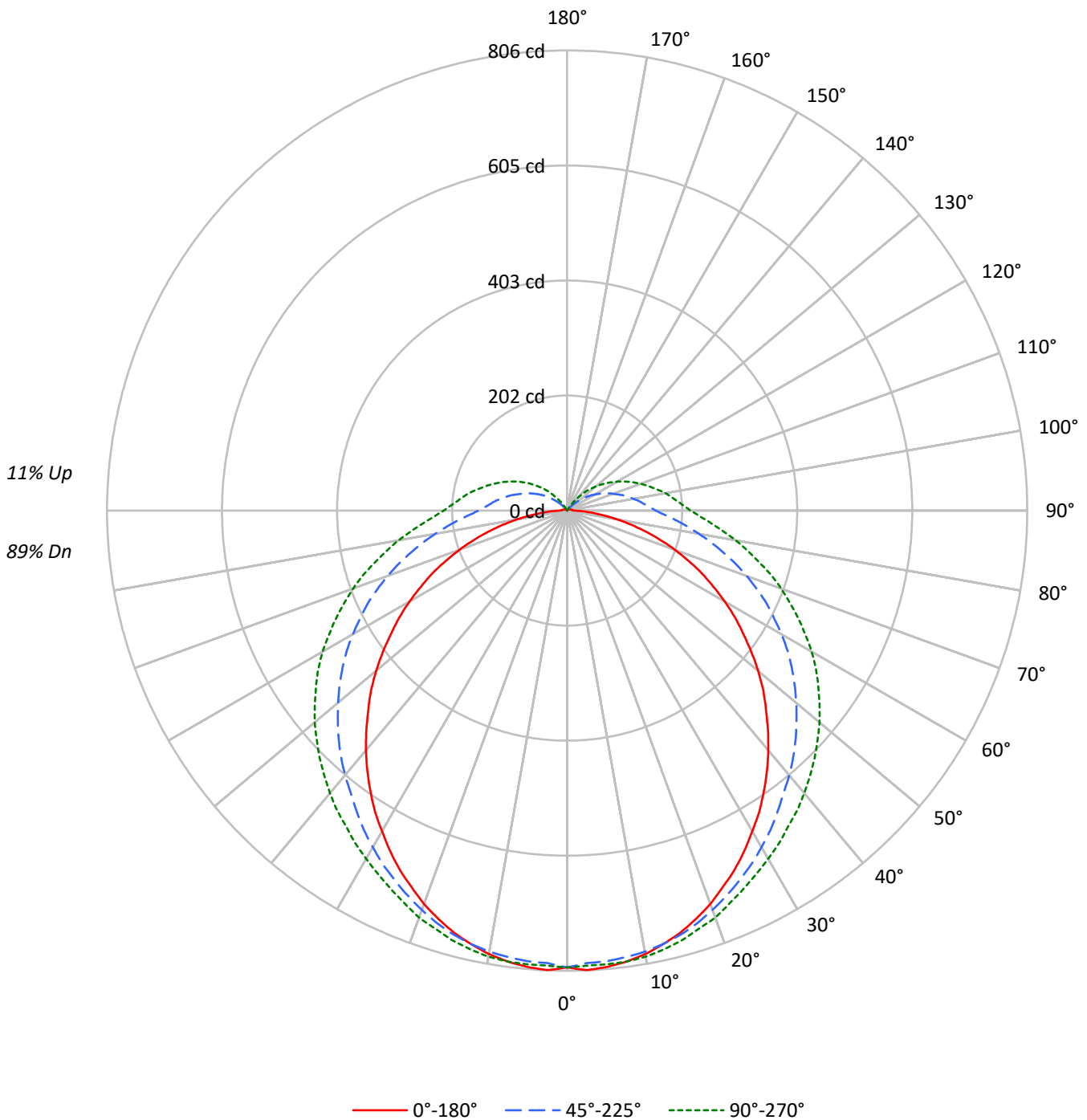
Lumens per Lamp: N/A
Luminaire Lumens: 3070.0 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): 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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15240	15240	15240
5°	15312	14613	14528
10°	15201	14129	13941
15°	15009	13631	13320
20°	14747	13091	12733
25°	14445	12557	12131
30°	14088	12056	11646
35°	13759	11559	11215
40°	13389	11130	10862
45°	12987	10745	10507
50°	12620	10348	10175
55°	12134	9977	9822
60°	11705	9567	9472
65°	11232	9149	9049
70°	10549	8652	8644
75°	9790	8121	8169
80°	8711	7599	7752
85°	7631	7188	7339

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12987 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.9	2.5
10°-20°	217.8	7.1
20°-30°	329.9	10.7
30°-40°	402.4	13.1
40°-50°	433.0	14.1
50°-60°	421.0	13.7
60°-70°	368.0	12.0
70°-80°	283.4	9.2
80°-90°	190.4	6.2
90°-100°	131.8	4.3
100°-110°	96.9	3.2
110°-120°	64.5	2.1
120°-130°	36.5	1.2
130°-140°	15.7	0.5
140°-150°	2.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	623.6	20.3
0°-40°	1026.0	33.4
0°-60°	1880.0	61.2
0°-90°	2721.8	88.7
90°-120°	293.2	9.5
90°-150°	348.3	11.3
90°-180°	348.0	11.3
0°-180°	3070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	802	799	792	799	798	76
15°	766	769	769	779	779	216
25°	694	705	714	730	731	319
35°	601	621	643	668	675	376
45°	492	523	566	601	613	380
55°	377	421	480	524	537	338
65°	261	316	386	432	447	257
75°	144	210	283	333	348	152
85°	44	115	190	238	253	45
90°	12	80	155	202	216	8
95°	9	65	135	179	193	7
105°	7	40	102	143	155	7
115°	4	19	71	107	119	4
125°	3	2	42	72	84	3
135°	1	1	14	39	49	1
145°	1	0	0	9	13	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	800.1	800.1	800.1	800.1	800.1
2.5°	805.6	802.3	793.4	800.1	797.8
5°	802.3	799.0	792.3	799.0	797.8
7.5°	796.7	794.5	788.9	797.8	796.7
10°	788.9	787.8	784.5	793.4	793.4
12.5°	777.8	778.9	777.8	787.8	786.7
15°	765.5	768.9	768.9	778.9	778.9
17.5°	749.9	755.5	757.7	768.9	767.8
20°	733.2	739.9	744.4	756.6	758.8
22.5°	713.2	723.2	729.9	743.2	744.4
25°	694.2	705.4	714.3	729.9	731.0
27.5°	671.9	685.3	698.7	714.3	717.6
30°	648.5	665.2	680.8	699.8	704.2
32.5°	626.2	643.0	663.0	683.1	690.9
35°	600.6	620.7	643.0	667.5	675.3
37.5°	575.0	596.1	622.9	651.9	661.9
40°	548.2	572.7	605.1	636.3	646.3
42.5°	520.4	547.1	586.1	618.4	629.6
45°	492.5	522.6	566.1	600.6	612.9
47.5°	465.8	498.1	544.9	583.9	595.0
50°	436.8	472.5	523.7	563.8	577.2
52.5°	406.7	446.8	502.5	543.8	557.1
55°	376.6	421.2	480.3	523.7	537.1
57.5°	348.8	395.6	458.0	501.4	517.0
60°	318.7	368.8	433.5	479.1	494.7
62.5°	288.6	343.2	408.9	455.7	470.2
65°	260.7	316.5	385.5	432.3	446.8
67.5°	229.5	288.6	359.9	408.9	422.3
70°	200.6	263.0	334.3	383.3	398.9
72.5°	171.6	235.1	308.7	357.7	374.4
75°	143.7	209.5	283.0	333.2	347.7
77.5°	114.8	183.9	258.5	308.7	323.1
80°	89.1	158.2	234.0	284.1	299.7
82.5°	63.5	134.8	211.7	260.7	275.2
85°	43.5	114.8	190.5	238.5	252.9
87.5°	25.6	95.8	170.5	218.4	232.9
90°	12.3	80.2	154.9	201.7	216.2
92.5°	10.0	72.4	143.7	189.4	203.9
95°	8.9	64.6	134.8	179.4	192.8
97.5°	8.9	59.1	127.0	170.5	183.9
100°	7.8	52.4	118.1	160.5	174.9
102.5°	7.8	45.7	110.3	151.5	164.9
105°	6.7	40.1	102.5	142.6	154.9
107.5°	5.6	34.5	93.6	133.7	146.0
110°	5.6	29.0	85.8	124.8	137.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.5	24.5	79.1	115.9	128.1
115°	4.5	18.9	71.3	107.0	119.2
117.5°	4.5	13.4	63.5	98.1	110.3
120°	3.3	8.9	56.8	90.3	101.4
122.5°	3.3	5.6	49.0	81.3	92.5
125°	3.3	2.2	42.3	72.4	83.6
127.5°	2.2	2.2	34.5	64.6	74.7
130°	2.2	1.1	27.9	55.7	65.7
132.5°	2.2	1.1	21.2	47.9	56.8
135°	1.1	1.1	14.5	39.0	49.0
137.5°	1.1	1.1	7.8	31.2	39.0
140°	1.1	0.0	3.3	23.4	30.1
142.5°	1.1	0.0	0.0	15.6	22.3
145°	1.1	0.0	0.0	8.9	13.4
147.5°	0.0	0.0	0.0	2.2	6.7
150°	0.0	0.0	0.0	0.0	1.1
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	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	17.68	19.16	18.21	19.69	20.27	20.74	22.22	21.27	22.75	23.34
	3H	19.18	20.53	19.72	21.07	21.69	23.38	24.73	23.92	25.27	25.89
	4H	19.69	20.97	20.25	21.52	22.16	24.66	25.94	25.22	26.49	27.13
	6H	20.00	21.20	20.58	21.77	22.42	25.98	27.18	26.56	27.75	28.40
	8H	20.08	21.23	20.66	21.82	22.47	26.67	27.81	27.25	28.41	29.06
	12H	20.12	21.22	20.71	21.80	22.49	27.42	28.52	28.01	29.11	29.79
4H	2H	18.80	20.08	19.36	20.64	21.27	21.14	22.42	21.70	22.98	23.61
	3H	20.56	21.66	21.13	22.25	22.91	23.98	25.08	24.56	25.68	26.33
	4H	21.21	22.22	21.80	22.82	23.51	25.42	26.43	26.02	27.04	27.72
	6H	21.66	22.55	22.27	23.18	23.88	26.93	27.82	27.54	28.45	29.15
	8H	21.79	22.63	22.40	23.26	23.97	27.71	28.55	28.33	29.18	29.89
	12H	21.86	22.63	22.50	23.28	24.00	28.58	29.34	29.22	30.00	30.71
8H	4H	22.05	22.89	22.67	23.52	24.23	25.62	26.46	26.23	27.09	27.80
	6H	22.71	23.43	23.36	24.10	24.81	27.28	27.99	27.93	28.66	29.38
	8H	22.94	23.59	23.60	24.27	24.99	28.19	28.83	28.85	29.51	30.24
	12H	23.11	23.69	23.77	24.36	25.15	29.22	29.80	29.88	30.46	31.25
12H	4H	22.28	23.04	22.92	23.70	24.42	25.62	26.39	26.26	27.04	27.76
	6H	23.06	23.70	23.71	24.38	25.11	27.31	27.96	27.97	28.64	29.36
	8H	23.39	23.97	24.06	24.64	25.43	28.28	28.86	28.94	29.53	30.32