

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: P243126

Luminaire Tested: S122DRP-H675D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243126
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-H675D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

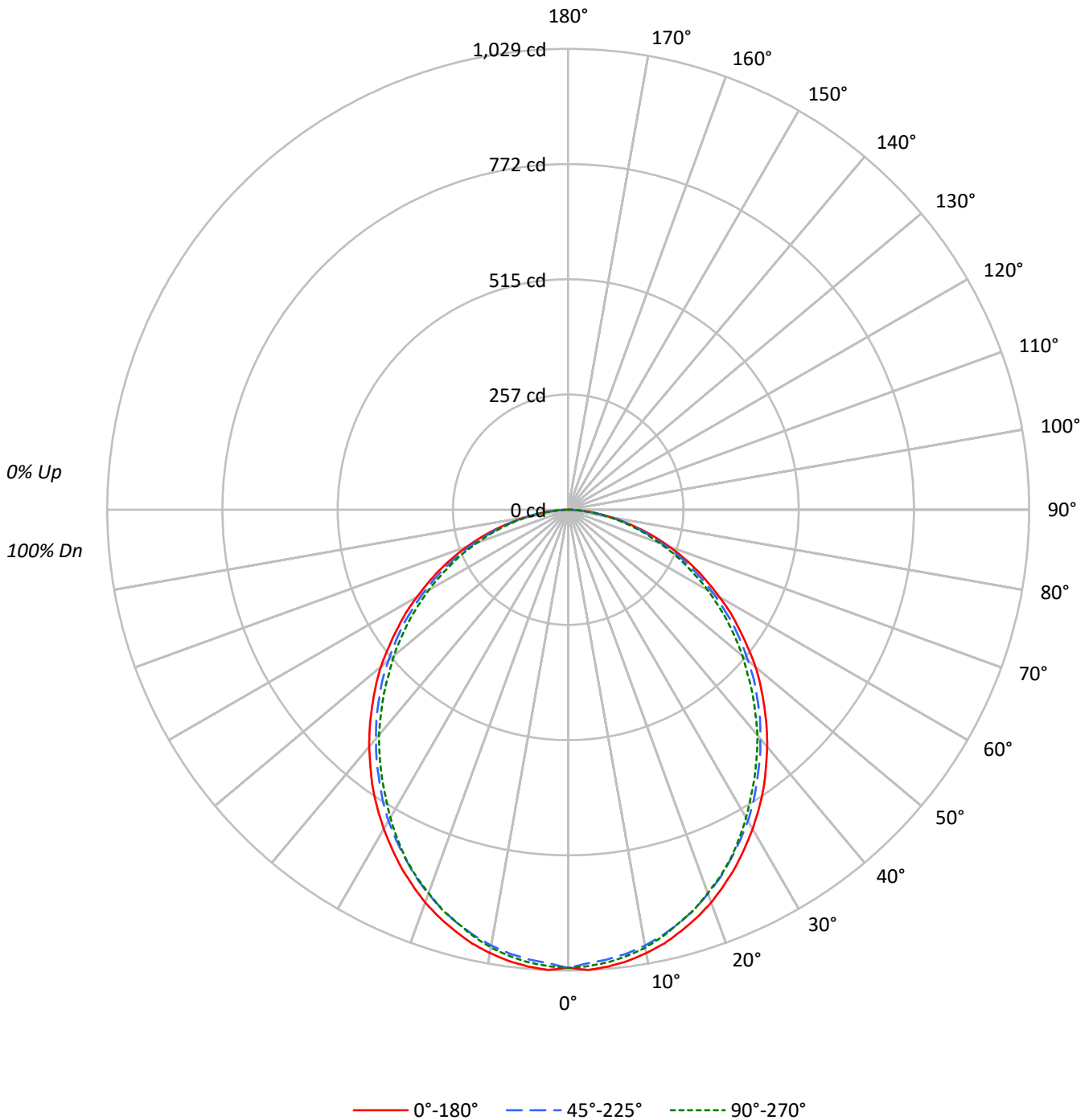
Lumens per Lamp: N/A
Luminaire Lumens: 2603.2 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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				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	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	28	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19486	19486	19486
5°	19579	19273	19400
10°	19440	19113	19204
15°	19207	18854	18834
20°	18922	18501	18462
25°	18528	18072	18053
30°	18104	17648	17461
35°	17672	17103	16882
40°	17184	16600	16341
45°	16661	16079	15672
50°	16177	15534	15059
55°	15498	14967	14403
60°	14834	14259	13722
65°	14193	13512	12917
70°	13338	12653	12024
75°	12143	11657	11105
80°	10552	10234	9828
85°	9070	8043	7409

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16661 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.3	3.7
10°-20°	271.1	10.4
20°-30°	398.7	15.3
30°-40°	462.9	17.8
40°-50°	462.3	17.8
50°-60°	402.6	15.5
60°-70°	297.7	11.4
70°-80°	167.8	6.4
80°-90°	43.8	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°	766.1	29.4
0°-40°	1229.0	47.2
0°-60°	2093.9	80.4
0°-90°	2603.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2603.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1024	1019	1008	1016	1015	97
15°	974	969	956	960	955	275
25°	882	874	860	859	859	406
35°	760	752	736	729	726	475
45°	618	612	597	587	582	478
55°	467	463	451	438	434	418
65°	315	310	300	290	287	311
75°	165	164	158	153	151	175
85°	42	40	37	35	34	47
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1023.0	1023.0	1023.0	1023.0	1023.0
2.5°	1028.7	1024.0	1013.6	1022.1	1020.2
5°	1024.0	1019.3	1008.0	1016.4	1014.6
7.5°	1016.4	1011.7	999.5	1008.0	1005.1
10°	1005.1	999.5	988.2	993.8	992.9
12.5°	991.9	986.3	973.1	977.8	975.9
15°	974.0	969.3	956.1	959.9	955.1
17.5°	955.1	947.6	935.3	939.1	936.3
20°	933.5	925.9	912.7	914.6	910.8
22.5°	908.0	900.5	888.2	888.2	886.3
25°	881.6	874.1	859.9	859.0	859.0
27.5°	852.4	845.8	831.6	828.8	826.9
30°	823.1	817.5	802.4	796.7	793.9
32.5°	792.0	784.5	770.3	763.7	759.0
35°	760.0	751.5	735.5	728.9	726.0
37.5°	725.1	716.6	702.5	696.8	691.1
40°	691.1	683.6	667.6	659.1	657.2
42.5°	655.3	647.8	633.6	624.2	618.5
45°	618.5	611.9	596.9	587.4	581.8
47.5°	582.7	575.2	562.0	550.6	543.1
50°	545.9	538.4	524.2	511.0	508.2
52.5°	505.4	500.7	486.5	474.3	470.5
55°	466.7	463.0	450.7	438.4	433.7
57.5°	430.0	425.2	411.1	401.7	396.0
60°	389.4	386.6	374.3	364.0	360.2
62.5°	351.7	347.9	337.6	327.2	322.5
65°	314.9	310.2	299.8	290.4	286.6
67.5°	277.2	272.5	264.0	256.5	252.7
70°	239.5	235.7	227.2	220.6	215.9
72.5°	202.7	199.0	191.4	184.8	183.9
75°	165.0	164.1	158.4	152.7	150.9
77.5°	130.1	129.2	125.4	122.6	120.7
80°	96.2	96.2	93.3	90.5	89.6
82.5°	66.0	66.9	64.1	62.2	62.2
85°	41.5	39.6	36.8	34.9	33.9
87.5°	17.0	14.1	13.2	10.4	9.4
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	21.60	23.21	21.97	23.53	23.84	21.17	22.78	21.54	23.10	23.41
	3H	23.36	24.81	23.73	25.14	25.50	22.87	24.33	23.25	24.66	25.02
	4H	24.00	25.37	24.40	25.72	26.09	23.50	24.87	23.90	25.22	25.59
	6H	24.46	25.73	24.87	26.09	26.48	23.96	25.23	24.37	25.59	25.99
	8H	24.60	25.81	25.02	26.20	26.60	24.10	25.31	24.53	25.70	26.10
	12H	24.69	25.85	25.12	26.23	26.66	24.18	25.34	24.61	25.72	26.15
4H	2H	22.16	23.53	22.56	23.88	24.25	21.82	23.19	22.22	23.54	23.91
	3H	24.14	25.28	24.55	25.68	26.08	23.74	24.88	24.15	25.28	25.68
	4H	24.92	25.95	25.35	26.37	26.80	24.48	25.52	24.92	25.93	26.37
	6H	25.50	26.41	25.96	26.85	27.30	25.07	25.97	25.52	26.41	26.87
	8H	25.69	26.53	26.15	26.98	27.44	25.25	26.10	25.71	26.54	27.00
	12H	25.82	26.58	26.30	27.06	27.53	25.37	26.13	25.85	26.60	27.07
8H	4H	25.19	26.03	25.65	26.48	26.94	24.81	25.65	25.27	26.09	26.56
	6H	25.89	26.59	26.38	27.08	27.56	25.50	26.20	26.00	26.69	27.17
	8H	26.14	26.77	26.65	27.28	27.77	25.75	26.38	26.26	26.89	27.37
	12H	26.35	26.91	26.86	27.40	27.96	25.93	26.49	26.44	26.98	27.54
12H	4H	25.21	25.97	25.69	26.45	26.92	24.84	25.60	25.32	26.08	26.54
	6H	25.93	26.56	26.44	27.07	27.56	25.56	26.19	26.07	26.70	27.18
	8H	26.24	26.80	26.75	27.29	27.85	25.86	26.42	26.37	26.91	27.47