

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: P243119

Luminaire Tested: S122DRP-H1005D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243119
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-H1005D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

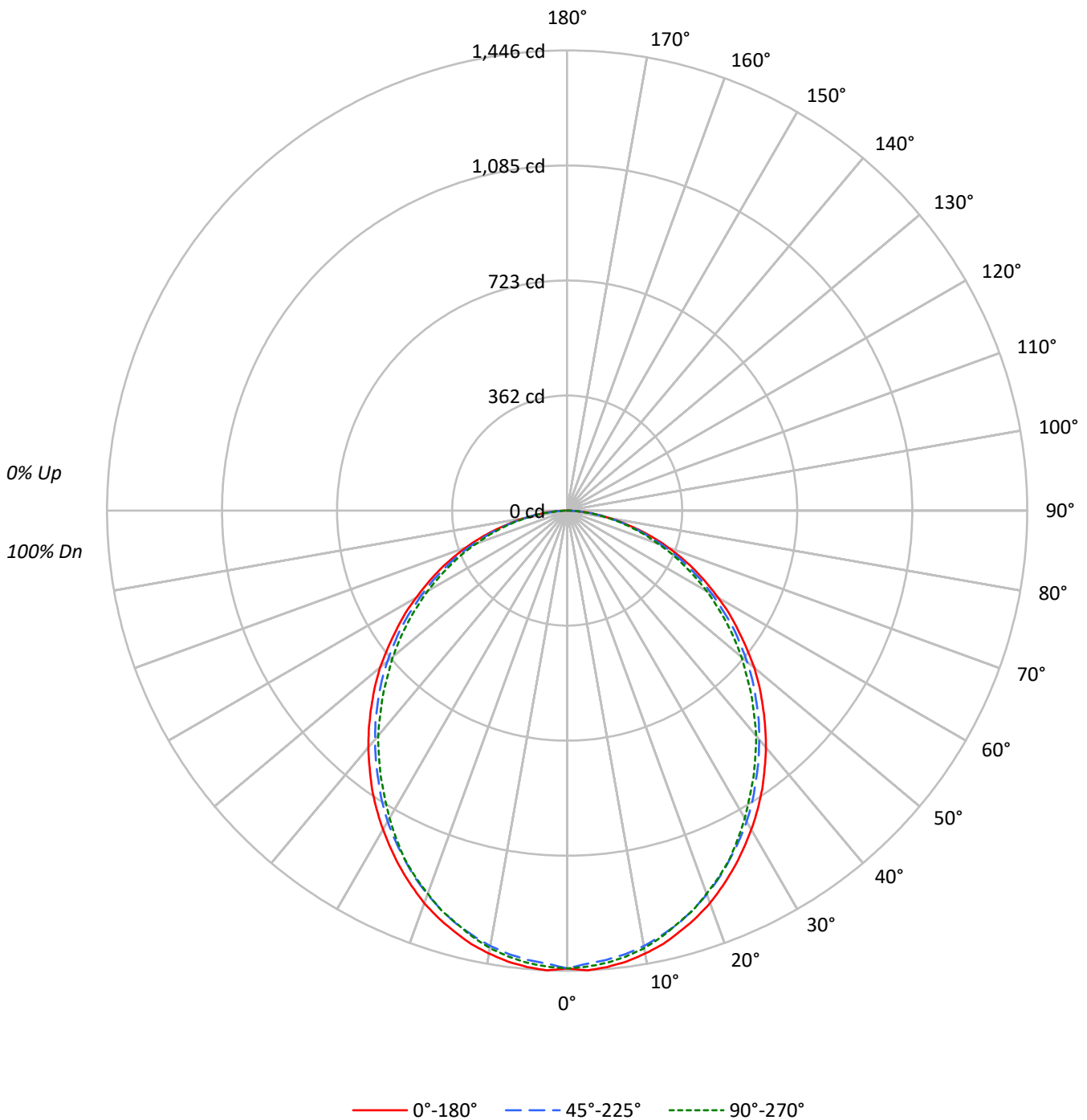
Lumens per Lamp: N/A
Luminaire Lumens: 3660.4 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	27400	27400	27400
5°	27530	27099	27277
10°	27335	26873	27003
15°	27006	26511	26483
20°	26605	26015	25960
25°	26052	25411	25384
30°	25456	24816	24552
35°	24848	24046	23739
40°	24164	23341	22978
45°	23428	22606	22035
50°	22746	21842	21176
55°	21795	21044	20254
60°	20861	20050	19295
65°	19957	19002	18163
70°	18757	17794	16908
75°	17074	16390	15609
80°	14830	14402	13821
85°	12741	11299	10425

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23428 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.4	3.7
10°-20°	381.3	10.4
20°-30°	560.5	15.3
30°-40°	650.9	17.8
40°-50°	650.0	17.8
50°-60°	566.1	15.5
60°-70°	418.7	11.4
70°-80°	236.0	6.4
80°-90°	61.6	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°	1077.2	29.4
0°-40°	1728.1	47.2
0°-60°	2944.2	80.4
0°-90°	3660.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3660.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1438	1438	1438	1438	1438	
5°	1440	1433	1417	1429	1427	137
15°	1370	1363	1344	1350	1343	386
25°	1240	1229	1209	1208	1208	571
35°	1069	1057	1034	1025	1021	668
45°	870	860	839	826	818	672
55°	656	651	634	616	610	588
65°	443	436	422	408	403	438
75°	232	231	223	215	212	247
85°	58	56	52	49	48	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1438.5	1438.5	1438.5	1438.5	1438.5
2.5°	1446.4	1439.8	1425.2	1437.2	1434.5
5°	1439.8	1433.2	1417.3	1429.2	1426.6
7.5°	1429.2	1422.6	1405.3	1417.3	1413.3
10°	1413.3	1405.3	1389.4	1397.4	1396.1
12.5°	1394.7	1386.8	1368.2	1374.9	1372.2
15°	1369.5	1362.9	1344.4	1349.7	1343.0
17.5°	1343.0	1332.4	1315.2	1320.5	1316.5
20°	1312.5	1301.9	1283.4	1286.0	1280.7
22.5°	1276.7	1266.1	1248.9	1248.9	1246.2
25°	1239.6	1229.0	1209.1	1207.8	1207.8
27.5°	1198.5	1189.2	1169.4	1165.4	1162.7
30°	1157.4	1149.5	1128.3	1120.3	1116.3
32.5°	1113.7	1103.1	1083.2	1073.9	1067.3
35°	1068.6	1056.7	1034.1	1024.8	1020.9
37.5°	1019.5	1007.6	987.7	979.8	971.8
40°	971.8	961.2	938.7	926.7	924.1
42.5°	921.4	910.8	890.9	877.7	869.7
45°	869.7	860.4	839.2	826.0	818.0
47.5°	819.3	808.7	790.2	774.3	763.7
50°	767.6	757.0	737.1	718.6	714.6
52.5°	710.6	704.0	684.1	666.9	661.6
55°	656.3	651.0	633.7	616.5	609.9
57.5°	604.6	597.9	578.0	564.8	556.8
60°	547.6	543.6	526.3	511.8	506.5
62.5°	494.5	489.2	474.6	460.1	453.4
65°	442.8	436.2	421.6	408.3	403.0
67.5°	389.8	383.2	371.2	360.6	355.3
70°	336.8	331.4	319.5	310.2	303.6
72.5°	285.0	279.7	269.1	259.9	258.5
75°	232.0	230.7	222.7	214.8	212.1
77.5°	183.0	181.6	176.3	172.4	169.7
80°	135.2	135.2	131.3	127.3	126.0
82.5°	92.8	94.1	90.2	87.5	87.5
85°	58.3	55.7	51.7	49.1	47.7
87.5°	23.9	19.9	18.6	14.6	13.3
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	22.79	24.40	23.15	24.71	25.02	22.36	23.97	22.72	24.28	24.60
	3H	24.54	25.99	24.92	26.32	26.68	24.06	25.51	24.44	25.84	26.20
	4H	25.19	26.55	25.58	26.90	27.28	24.68	26.05	25.08	26.40	26.78
	6H	25.64	26.91	26.05	27.28	27.67	25.15	26.41	25.56	26.78	27.17
	8H	25.78	26.99	26.21	27.38	27.78	25.29	26.50	25.71	26.89	27.28
	12H	25.87	27.03	26.30	27.42	27.84	25.37	26.53	25.80	26.91	27.34
4H	2H	23.35	24.71	23.74	25.06	25.44	23.01	24.37	23.40	24.72	25.10
	3H	25.32	26.47	25.73	26.86	27.26	24.92	26.07	25.33	26.46	26.86
	4H	26.10	27.14	26.53	27.55	27.99	25.67	26.70	26.10	27.12	27.55
	6H	26.69	27.59	27.14	28.03	28.49	26.25	27.16	26.71	27.60	28.05
	8H	26.87	27.72	27.33	28.16	28.62	26.44	27.28	26.90	27.72	28.19
	12H	27.01	27.77	27.49	28.24	28.71	26.55	27.31	27.03	27.79	28.26
8H	4H	26.37	27.22	26.83	27.66	28.13	25.99	26.84	26.45	27.28	27.74
	6H	27.07	27.78	27.57	28.26	28.74	26.69	27.39	27.18	27.88	28.35
	8H	27.33	27.96	27.84	28.46	28.95	26.94	27.57	27.45	28.07	28.56
	12H	27.53	28.09	28.04	28.58	29.14	27.11	27.67	27.62	28.16	28.72
12H	4H	26.40	27.16	26.88	27.63	28.10	26.02	26.78	26.50	27.26	27.73
	6H	27.12	27.75	27.63	28.25	28.74	26.74	27.37	27.25	27.88	28.37
	8H	27.42	27.98	27.93	28.47	29.03	27.05	27.60	27.55	28.09	28.65