

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: P242603

Luminaire Tested: S124DRP-S1195D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242603
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S1195D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

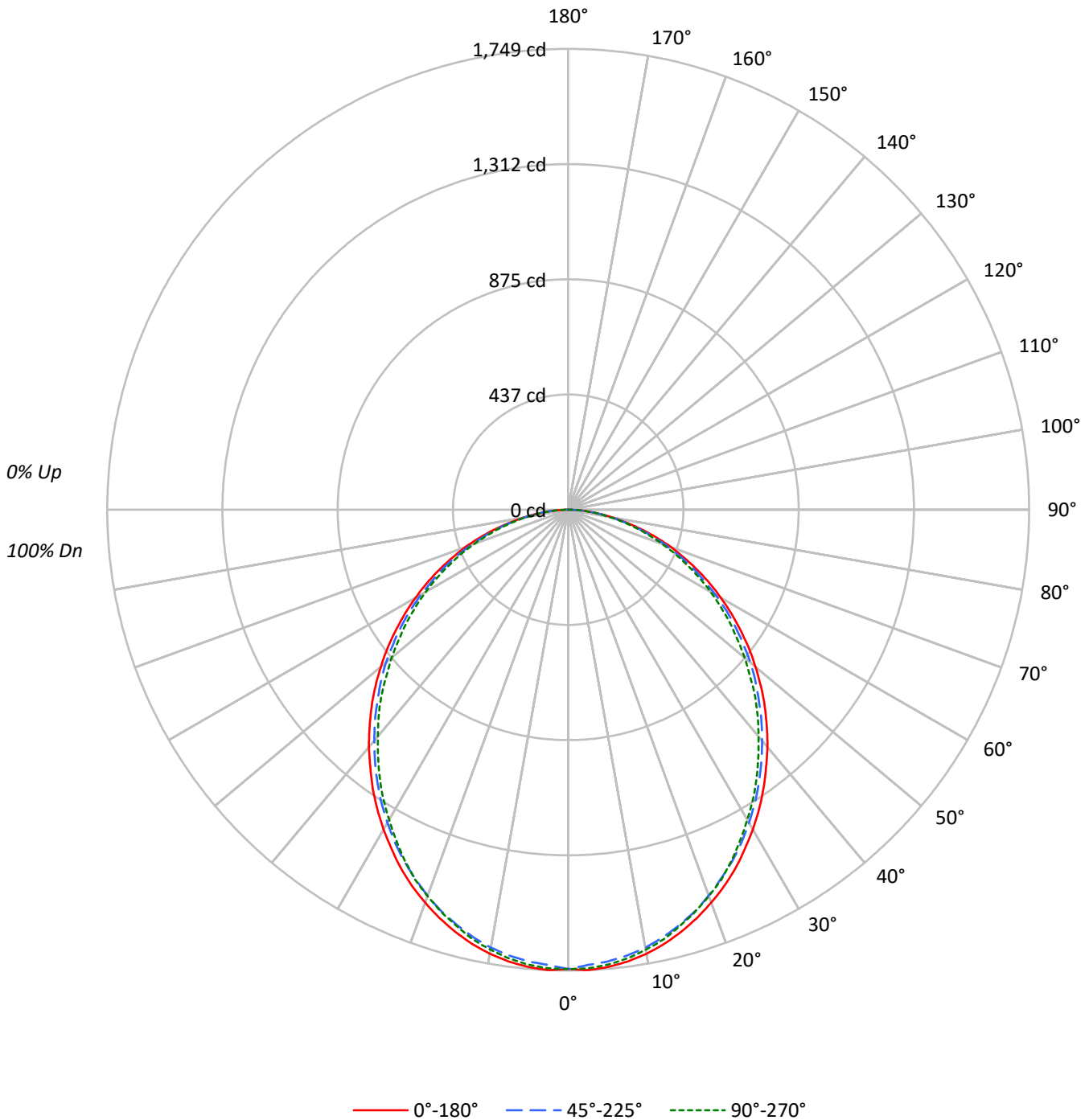
Lumens per Lamp: N/A
Luminaire Lumens: 4474.6 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	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	52	40	33	28	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15497	15497	15497
5°	15544	15356	15469
10°	15445	15231	15307
15°	15259	15015	15053
20°	15011	14747	14760
25°	14728	14441	14400
30°	14381	14080	13951
35°	14022	13703	13522
40°	13648	13276	13032
45°	13258	12854	12609
50°	12827	12479	12093
55°	12361	11993	11604
60°	11895	11449	11100
65°	11370	10931	10489
70°	10783	10237	9840
75°	9884	9403	9163
80°	8794	8436	8221
85°	7690	7404	7262

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13258 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.3	3.7
10°-20°	462.9	10.3
20°-30°	681.3	15.2
30°-40°	792.0	17.7
40°-50°	791.9	17.7
50°-60°	692.6	15.5
60°-70°	514.2	11.5
70°-80°	291.8	6.5
80°-90°	83.5	1.9
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°	1308.6	29.2
0°-40°	2100.6	46.9
0°-60°	3585.1	80.1
0°-90°	4474.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4474.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1743	1743	1743	1743	1743	
5°	1742	1736	1721	1736	1734	165
15°	1658	1653	1632	1640	1636	467
25°	1502	1492	1472	1474	1468	691
35°	1292	1282	1263	1253	1246	808
45°	1055	1045	1022	1007	1003	813
55°	798	794	774	757	749	714
65°	541	534	520	506	499	535
75°	288	281	274	268	267	305
85°	75	75	73	73	71	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1743.4	1743.4	1743.4	1743.4	1743.4
2.5°	1748.9	1744.8	1729.4	1743.4	1742.0
5°	1742.0	1736.4	1721.0	1736.4	1733.6
7.5°	1729.4	1723.8	1707.0	1719.6	1718.2
10°	1711.2	1705.6	1687.5	1698.7	1695.9
12.5°	1687.5	1681.9	1662.3	1674.9	1670.7
15°	1658.1	1652.6	1631.6	1640.0	1635.8
17.5°	1624.6	1617.6	1598.1	1603.7	1600.9
20°	1586.9	1579.9	1559.0	1563.2	1560.4
22.5°	1546.4	1536.6	1515.7	1524.0	1518.5
25°	1501.7	1491.9	1472.4	1473.8	1468.2
27.5°	1451.4	1441.6	1423.5	1420.7	1413.7
30°	1401.1	1389.9	1371.8	1366.2	1359.2
32.5°	1348.0	1338.3	1318.7	1311.7	1304.7
35°	1292.2	1282.4	1262.8	1253.0	1246.1
37.5°	1233.5	1225.1	1204.1	1194.4	1184.6
40°	1176.2	1165.0	1144.1	1130.1	1123.1
42.5°	1114.7	1109.2	1085.4	1068.6	1064.5
45°	1054.7	1044.9	1022.5	1007.2	1003.0
47.5°	991.8	984.8	963.9	947.1	935.9
50°	927.6	922.0	902.4	882.9	874.5
52.5°	864.7	857.7	836.8	820.0	808.8
55°	797.6	793.5	773.9	757.1	748.8
57.5°	734.8	730.6	711.0	694.3	685.9
60°	669.1	662.1	644.0	631.4	624.4
62.5°	604.9	599.3	579.7	568.5	561.6
65°	540.6	533.6	519.7	505.7	498.7
67.5°	475.0	469.4	455.4	441.4	440.0
70°	414.9	405.1	393.9	382.8	378.6
72.5°	350.6	340.8	332.5	324.1	319.9
75°	287.8	280.8	273.8	268.2	266.8
77.5°	226.3	223.5	216.5	215.1	210.9
80°	171.8	167.6	164.8	162.0	160.6
82.5°	118.7	117.3	117.3	115.9	114.5
85°	75.4	75.4	72.6	72.6	71.2
87.5°	36.3	34.9	33.5	33.5	33.5
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	20.82	22.43	21.19	22.75	23.06	20.45	22.06	20.81	22.37	22.69
	3H	22.58	24.04	22.96	24.37	24.73	22.16	23.62	22.53	23.94	24.30
	4H	23.24	24.61	23.63	24.96	25.33	22.80	24.17	23.20	24.52	24.90
	6H	23.71	24.98	24.12	25.35	25.74	23.28	24.55	23.69	24.91	25.30
	8H	23.86	25.08	24.29	25.46	25.86	23.43	24.65	23.86	25.04	25.44
	12H	23.97	25.13	24.39	25.51	25.94	23.54	24.71	23.97	25.09	25.52
4H	2H	21.39	22.76	21.79	23.11	23.49	21.09	22.47	21.49	22.81	23.19
	3H	23.37	24.52	23.78	24.92	25.32	23.02	24.17	23.43	24.57	24.97
	4H	24.15	25.19	24.58	25.61	26.04	23.79	24.83	24.22	25.24	25.68
	6H	24.76	25.67	25.21	26.11	26.56	24.39	25.30	24.85	25.74	26.20
	8H	24.96	25.81	25.42	26.25	26.71	24.60	25.45	25.06	25.89	26.36
	12H	25.11	25.87	25.59	26.35	26.82	24.75	25.52	25.23	25.99	26.46
8H	4H	24.43	25.28	24.89	25.72	26.19	24.11	24.96	24.57	25.40	25.87
	6H	25.15	25.86	25.65	26.35	26.82	24.83	25.54	25.33	26.03	26.50
	8H	25.42	26.06	25.93	26.56	27.05	25.11	25.75	25.62	26.25	26.74
	12H	25.65	26.21	26.16	26.70	27.26	25.34	25.91	25.85	26.40	26.96
12H	4H	24.46	25.22	24.94	25.70	26.17	24.14	24.91	24.62	25.38	25.85
	6H	25.20	25.84	25.71	26.34	26.83	24.89	25.53	25.40	26.03	26.52
	8H	25.53	26.09	26.04	26.58	27.14	25.23	25.79	25.74	26.28	26.85