

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: P243467

Luminaire Tested: S124DRP-H1195D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243467
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H1195D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

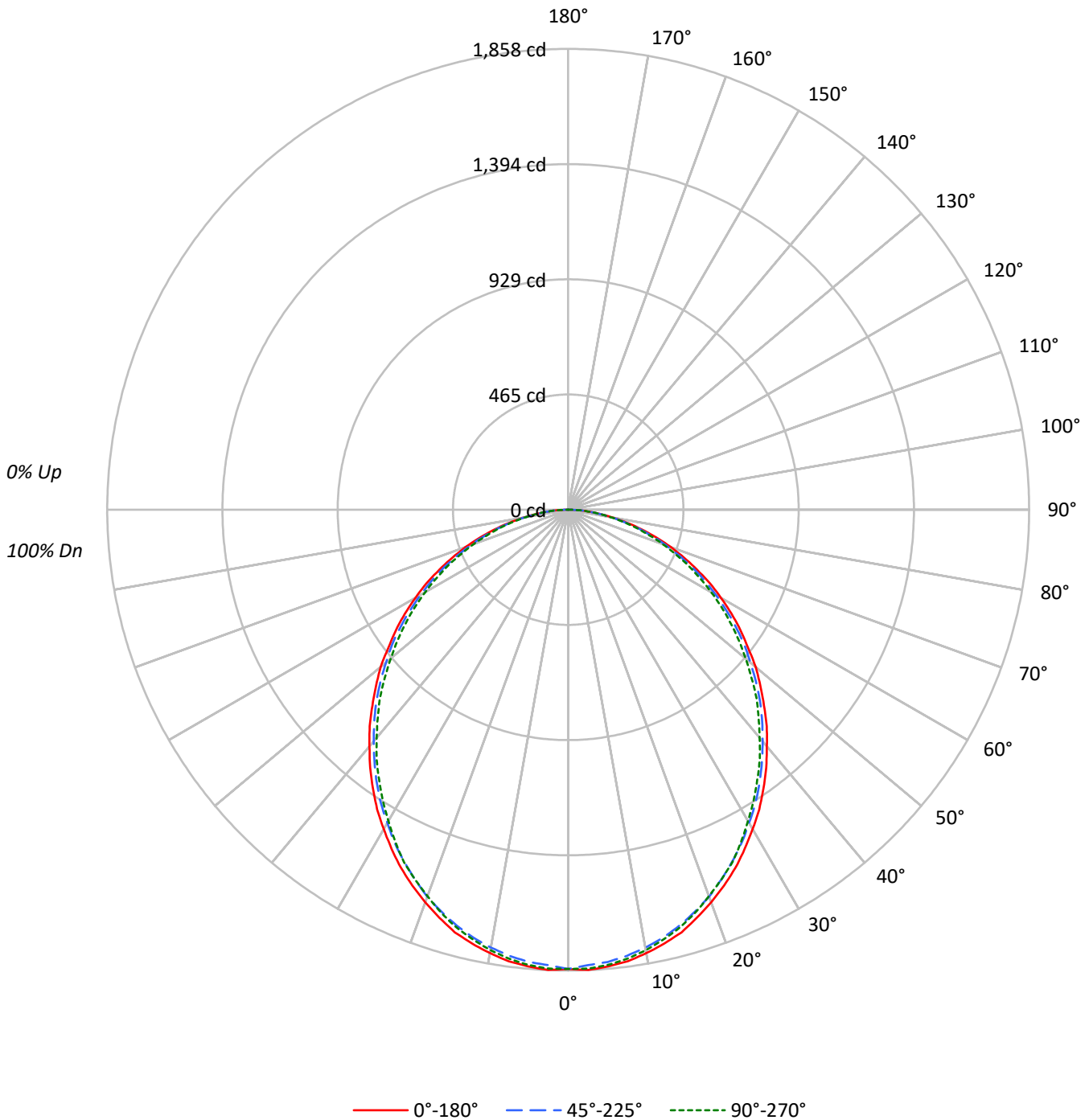
Lumens per Lamp: N/A
Luminaire Lumens: 4766.5 lumens
Efficiency: N/A
Efficacy: 126.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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	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	46	41	52	46	41	39																												
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	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	27	39	32	27	38	32	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16458	16458	16458
5°	16494	16332	16440
10°	16386	16182	16277
15°	16234	15971	16041
20°	15932	15704	15690
25°	15633	15352	15367
30°	15262	14968	14876
35°	14892	14598	14419
40°	14457	14143	13933
45°	14033	13749	13483
50°	13646	13251	12916
55°	13145	12795	12398
60°	12642	12213	11838
65°	12041	11629	11248
70°	11394	10884	10534
75°	10502	10090	9778
80°	9255	9101	8871
85°	8139	8139	7986

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14033 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.6	3.7
10°-20°	492.2	10.3
20°-30°	724.8	15.2
30°-40°	843.3	17.7
40°-50°	843.7	17.7
50°-60°	737.8	15.5
60°-70°	548.0	11.5
70°-80°	312.2	6.6
80°-90°	89.9	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°	1391.5	29.2
0°-40°	2234.8	46.9
0°-60°	3816.3	80.1
0°-90°	4766.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4766.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1852	1852	1852	1852	1852	
5°	1848	1846	1830	1844	1842	175
15°	1764	1755	1736	1746	1743	496
25°	1594	1586	1565	1570	1567	733
35°	1372	1360	1345	1333	1329	858
45°	1116	1112	1094	1077	1073	862
55°	848	842	826	808	800	758
65°	572	568	553	541	535	568
75°	306	300	294	288	285	324
85°	80	78	80	77	78	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1851.5	1851.5	1851.5	1851.5	1851.5
2.5°	1857.6	1853.0	1838.0	1853.0	1851.5
5°	1848.5	1845.5	1830.4	1844.0	1842.5
7.5°	1836.5	1830.4	1813.9	1827.4	1825.9
10°	1815.4	1810.9	1792.8	1806.3	1803.3
12.5°	1791.3	1786.7	1767.2	1777.7	1774.7
15°	1764.1	1755.1	1735.5	1746.1	1743.1
17.5°	1725.0	1719.0	1699.4	1708.4	1703.9
20°	1684.3	1676.8	1660.2	1661.7	1658.7
22.5°	1640.6	1633.1	1613.5	1619.5	1613.5
25°	1593.9	1586.4	1565.3	1569.8	1566.8
27.5°	1541.2	1533.6	1514.1	1515.6	1509.5
30°	1486.9	1477.9	1458.3	1456.8	1449.3
32.5°	1432.7	1423.7	1404.1	1398.1	1390.5
35°	1372.4	1360.4	1345.3	1333.3	1328.8
37.5°	1310.7	1304.7	1282.1	1274.5	1268.5
40°	1245.9	1239.9	1218.8	1208.2	1200.7
42.5°	1184.1	1176.6	1157.0	1142.0	1135.9
45°	1116.3	1111.8	1093.7	1077.2	1072.6
47.5°	1050.1	1048.5	1025.9	1009.4	1001.8
50°	986.8	977.7	958.2	943.1	934.0
52.5°	913.0	911.5	894.9	875.3	867.8
55°	848.2	842.2	825.6	807.5	800.0
57.5°	780.4	777.4	756.3	741.2	733.7
60°	711.1	705.1	687.0	673.4	665.9
62.5°	644.8	637.3	620.7	607.1	599.6
65°	572.5	568.0	552.9	540.8	534.8
67.5°	504.7	498.7	483.6	473.1	467.0
70°	438.4	429.4	418.8	409.8	405.3
72.5°	372.1	364.6	355.5	349.5	343.5
75°	305.8	299.8	293.8	287.7	284.7
77.5°	242.6	236.5	233.5	232.0	229.0
80°	180.8	177.8	177.8	176.3	173.3
82.5°	128.1	125.0	125.0	125.0	123.5
85°	79.8	78.3	79.8	76.8	78.3
87.5°	37.7	37.7	39.2	37.7	39.2
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	21.03	22.64	21.39	22.96	23.27	20.68	22.30	21.05	22.61	22.92
	3H	22.78	24.24	23.16	24.57	24.93	22.39	23.85	22.77	24.18	24.54
	4H	23.44	24.81	23.84	25.16	25.54	23.04	24.42	23.44	24.76	25.14
	6H	23.91	25.19	24.32	25.55	25.94	23.53	24.80	23.94	25.17	25.56
	8H	24.07	25.28	24.49	25.67	26.07	23.69	24.91	24.12	25.30	25.70
	12H	24.17	25.34	24.60	25.72	26.15	23.80	24.97	24.23	25.35	25.78
4H	2H	21.60	22.98	22.00	23.32	23.70	21.33	22.70	21.72	23.05	23.42
	3H	23.58	24.73	23.99	25.12	25.52	23.26	24.41	23.67	24.81	25.21
	4H	24.36	25.40	24.79	25.82	26.25	24.03	25.07	24.46	25.49	25.92
	6H	24.96	25.87	25.42	26.31	26.77	24.65	25.56	25.10	26.00	26.46
	8H	25.16	26.01	25.62	26.46	26.92	24.86	25.71	25.32	26.15	26.62
	12H	25.31	26.08	25.79	26.55	27.02	25.02	25.78	25.50	26.26	26.73
8H	4H	24.64	25.50	25.10	25.94	26.40	24.35	25.20	24.81	25.65	26.11
	6H	25.36	26.07	25.86	26.56	27.03	25.10	25.80	25.59	26.29	26.77
	8H	25.64	26.27	26.15	26.78	27.26	25.38	26.02	25.89	26.52	27.01
	12H	25.86	26.42	26.37	26.91	27.48	25.61	26.18	26.12	26.67	27.23
12H	4H	24.67	25.44	25.15	25.91	26.38	24.39	25.15	24.87	25.63	26.10
	6H	25.41	26.05	25.92	26.56	27.04	25.15	25.79	25.66	26.30	26.78
	8H	25.74	26.31	26.25	26.80	27.36	25.50	26.06	26.01	26.55	27.11