

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: P242710

Luminaire Tested: S124RDRP-S1195D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242710
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1195D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

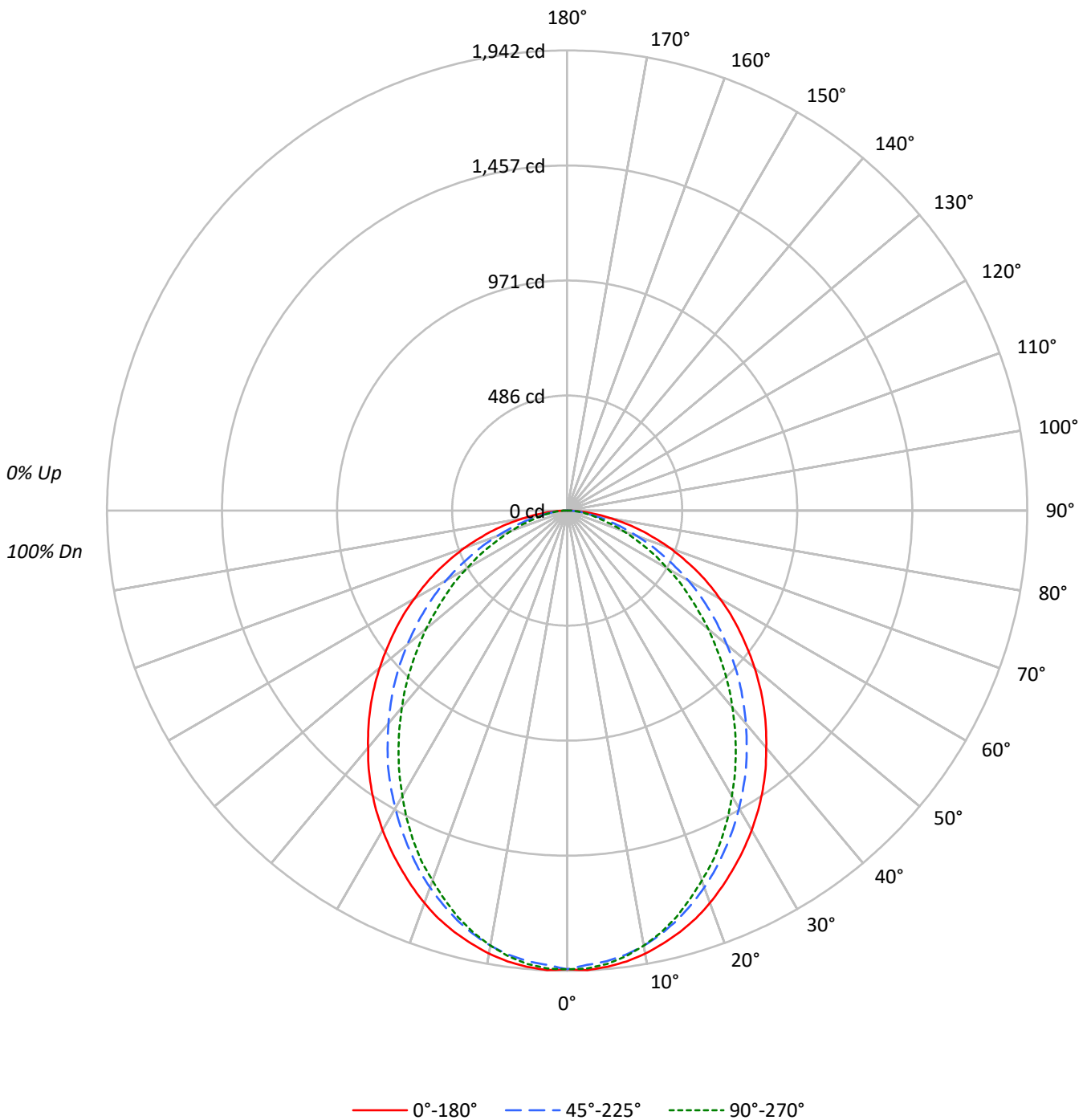
Lumens per Lamp: N/A
Luminaire Lumens: 4472.4 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17205	17205	17205
5°	17244	17033	17139
10°	17136	16829	16829
15°	16939	16475	16353
20°	16669	16010	15716
25°	16324	15466	15074
30°	15988	14893	14269
35°	15616	14298	13461
40°	15168	13620	12589
45°	14756	12948	11700
50°	14285	12175	10760
55°	13780	11369	9739
60°	13227	10487	8695
65°	12719	9383	7669
70°	11979	8166	6510
75°	11045	6769	5292
80°	9634	5160	4858
85°	8159	4681	4386

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14756 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	4.1
10°-20°	507.5	11.3
20°-30°	732.7	16.4
30°-40°	830.4	18.6
40°-50°	801.7	17.9
50°-60°	666.5	14.9
60°-70°	460.1	10.3
70°-80°	232.5	5.2
80°-90°	59.0	1.3
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°	1422.2	31.8
0°-40°	2252.5	50.4
0°-60°	3720.8	83.2
0°-90°	4472.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4472.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1936	1936	1936	1936	1936	
5°	1933	1927	1909	1924	1921	183
15°	1841	1827	1790	1787	1777	519
25°	1664	1638	1577	1552	1537	767
35°	1439	1392	1318	1267	1240	899
45°	1174	1119	1030	957	931	905
55°	889	830	734	657	628	796
65°	605	541	446	382	365	597
75°	322	267	197	163	154	339
85°	80	50	46	43	43	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1935.6	1935.6	1935.6	1935.6	1935.6
2.5°	1941.5	1935.6	1919.3	1935.6	1934.1
5°	1932.6	1926.7	1908.9	1923.7	1920.8
7.5°	1919.3	1913.4	1891.1	1901.5	1897.1
10°	1898.5	1891.1	1864.5	1870.4	1864.5
12.5°	1871.9	1863.0	1830.4	1833.3	1824.4
15°	1840.7	1827.4	1790.3	1787.4	1777.0
17.5°	1805.2	1785.9	1742.9	1735.5	1720.7
20°	1762.2	1742.9	1692.5	1680.7	1661.4
22.5°	1714.8	1692.5	1637.7	1618.4	1603.6
25°	1664.4	1637.7	1576.9	1551.7	1536.9
27.5°	1612.5	1579.9	1516.2	1486.5	1465.8
30°	1557.7	1520.6	1451.0	1413.9	1390.2
32.5°	1499.9	1456.9	1384.3	1339.8	1317.6
35°	1439.1	1391.7	1317.6	1267.2	1240.5
37.5°	1375.4	1326.5	1244.9	1190.1	1163.4
40°	1307.2	1258.3	1173.8	1111.6	1084.9
42.5°	1242.0	1190.1	1101.2	1037.5	1009.3
45°	1173.8	1119.0	1030.0	957.4	930.7
47.5°	1104.1	1047.8	955.9	880.4	850.7
50°	1033.0	975.2	880.4	806.2	778.1
52.5°	960.4	904.1	806.2	730.7	701.0
55°	889.2	830.0	733.6	656.6	628.4
57.5°	819.6	757.3	662.5	583.9	563.2
60°	744.0	684.7	589.9	512.8	489.1
62.5°	675.8	613.6	515.8	446.1	428.3
65°	604.7	541.0	446.1	382.4	364.6
67.5°	530.6	469.8	380.9	324.6	303.8
70°	460.9	398.7	314.2	265.3	250.5
72.5°	386.8	332.0	253.4	213.4	200.1
75°	321.6	266.8	197.1	163.0	154.1
77.5°	253.4	206.0	146.7	123.0	120.0
80°	188.2	145.2	100.8	96.3	94.9
82.5°	131.9	93.4	72.6	69.7	68.2
85°	80.0	50.4	45.9	43.0	43.0
87.5°	34.1	22.2	20.7	19.3	20.7
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	21.23	22.79	21.59	23.11	23.42	19.26	20.82	19.62	21.14	21.45
	3H	23.00	24.41	23.38	24.73	25.10	20.51	21.92	20.89	22.25	22.61
	4H	23.66	24.98	24.06	25.33	25.71	20.89	22.21	21.29	22.56	22.94
	6H	24.14	25.36	24.55	25.72	26.12	21.15	22.37	21.56	22.74	23.13
	8H	24.28	25.45	24.71	25.84	26.24	21.24	22.41	21.67	22.80	23.20
	12H	24.38	25.50	24.81	25.88	26.31	21.31	22.42	21.74	22.81	23.24
4H	2H	21.56	22.89	21.96	23.24	23.61	19.95	21.28	20.35	21.63	22.00
	3H	23.53	24.63	23.94	25.03	25.43	21.39	22.49	21.80	22.89	23.29
	4H	24.31	25.31	24.74	25.72	26.16	21.84	22.83	22.27	23.25	23.69
	6H	24.91	25.77	25.37	26.22	26.67	22.19	23.06	22.65	23.50	23.96
	8H	25.10	25.91	25.56	26.35	26.82	22.32	23.13	22.78	23.57	24.03
	12H	25.24	25.97	25.72	26.44	26.91	22.41	23.14	22.90	23.62	24.09
8H	4H	24.41	25.22	24.87	25.66	26.13	22.16	22.96	22.62	23.41	23.87
	6H	25.08	25.75	25.58	26.24	26.71	22.59	23.26	23.08	23.75	24.22
	8H	25.32	25.92	25.83	26.43	26.92	22.77	23.37	23.28	23.88	24.36
	12H	25.52	26.05	26.03	26.54	27.10	22.92	23.45	23.43	23.94	24.51
12H	4H	24.40	25.12	24.88	25.60	26.07	22.19	22.92	22.68	23.40	23.87
	6H	25.07	25.67	25.58	26.18	26.67	22.64	23.24	23.15	23.75	24.24
	8H	25.35	25.88	25.86	26.37	26.94	22.87	23.40	23.38	23.89	24.45