

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: P242538

Luminaire Tested: S123RDRP-S1165D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1165D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

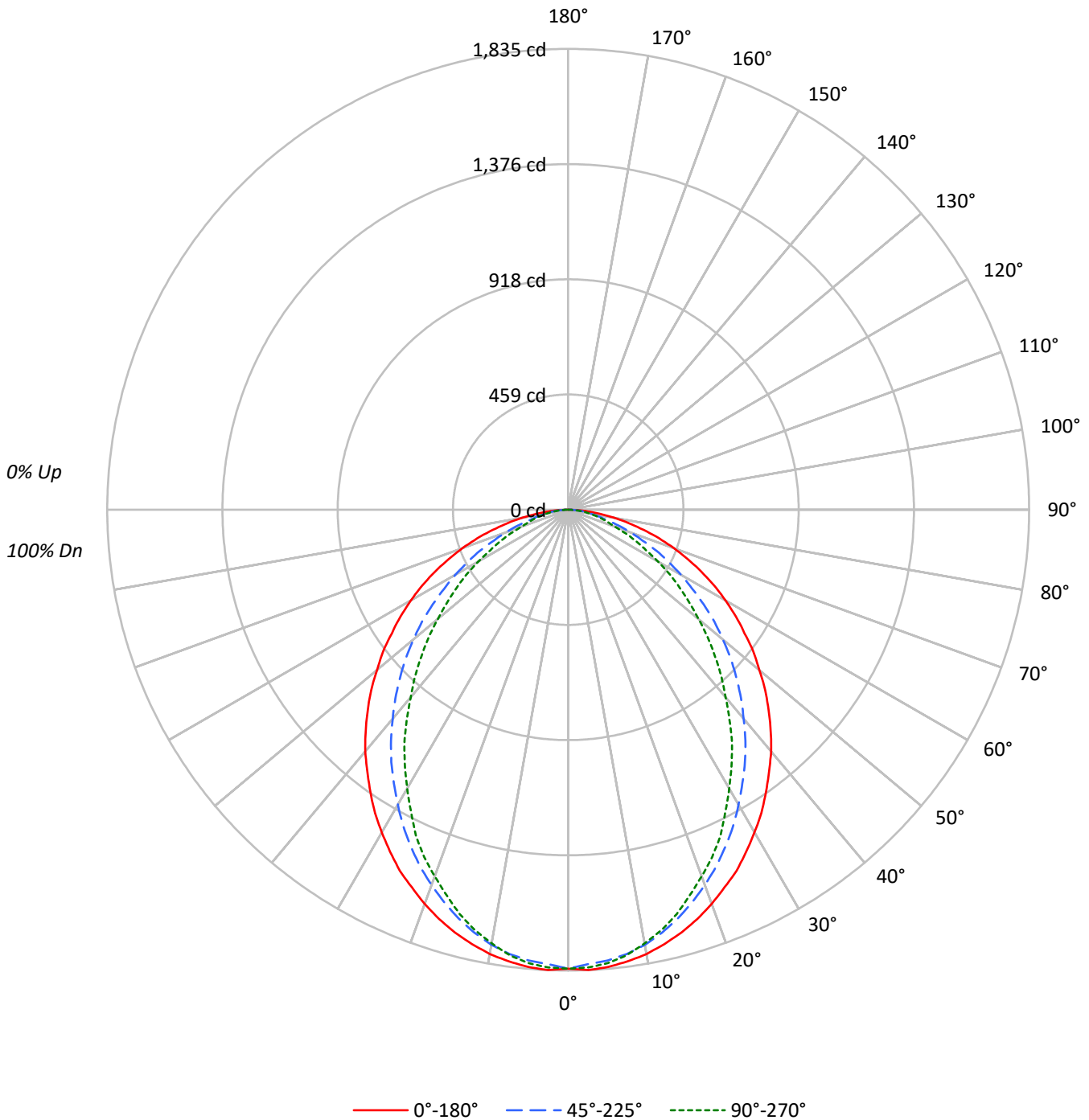
Lumens per Lamp: N/A
Luminaire Lumens: 4128.4 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88					86				
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75					73				
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64					62				
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56					54				
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49					47				
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35					34				
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32					30				
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29					28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22150	22150	22150
5°	22235	21928	22055
10°	22109	21653	21580
15°	21871	21146	20923
20°	21545	20513	20035
25°	21209	19802	19168
30°	20765	18980	17943
35°	20308	18159	16822
40°	19887	17190	15431
45°	19334	16233	14176
50°	18725	15148	12772
55°	18102	13905	11462
60°	17535	12575	10024
65°	16790	11137	8587
70°	15863	9349	6932
75°	14509	7357	6524
80°	12935	6520	6003
85°	10931	5772	5354

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19334 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.8	4.2
10°-20°	477.9	11.6
20°-30°	688.1	16.7
30°-40°	774.9	18.8
40°-50°	741.2	18.0
50°-60°	606.7	14.7
60°-70°	409.1	9.9
70°-80°	205.2	5.0
80°-90°	53.6	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°	1337.7	32.4
0°-40°	2112.6	51.2
0°-60°	3460.5	83.8
0°-90°	4128.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4128.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1827	1827	1827	1827	1827	
5°	1827	1820	1802	1816	1813	173
15°	1743	1727	1685	1678	1667	491
25°	1586	1549	1481	1450	1433	729
35°	1372	1319	1227	1163	1137	859
45°	1128	1061	947	863	827	870
55°	857	784	658	572	542	768
65°	585	504	388	316	299	579
75°	310	239	157	142	139	330
85°	79	46	42	38	38	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1827.4	1827.4	1827.4	1827.4	1827.4
2.5°	1834.8	1828.9	1811.1	1827.4	1824.4
5°	1827.4	1820.0	1802.2	1815.5	1812.6
7.5°	1814.1	1806.7	1784.4	1793.3	1788.9
10°	1796.3	1785.9	1759.2	1760.7	1753.3
12.5°	1771.1	1759.2	1725.1	1723.7	1714.8
15°	1742.9	1726.6	1685.1	1677.7	1667.3
17.5°	1708.8	1691.1	1639.2	1624.4	1609.5
20°	1670.3	1646.6	1590.3	1571.0	1553.2
22.5°	1627.3	1599.2	1538.4	1513.2	1496.9
25°	1585.8	1548.8	1480.6	1449.5	1433.2
27.5°	1535.4	1495.4	1421.3	1379.8	1354.6
30°	1483.6	1439.1	1356.1	1305.7	1282.0
32.5°	1431.7	1379.8	1290.9	1234.6	1209.4
35°	1372.4	1319.1	1227.2	1163.4	1136.8
37.5°	1313.1	1255.3	1159.0	1087.8	1055.2
40°	1256.8	1191.6	1086.4	1009.3	975.2
42.5°	1193.1	1127.9	1018.2	932.2	902.6
45°	1127.9	1061.2	947.0	862.6	827.0
47.5°	1064.1	990.0	877.4	785.5	754.4
50°	993.0	923.3	803.3	711.4	677.3
52.5°	929.3	852.2	733.6	637.3	607.7
55°	856.6	784.0	658.0	572.1	542.4
57.5°	791.4	712.9	585.4	503.9	478.7
60°	723.3	641.7	518.7	438.7	413.5
62.5°	655.1	573.6	450.6	376.4	349.8
65°	585.4	503.9	388.3	315.7	299.4
67.5°	515.8	432.8	320.1	265.3	247.5
70°	447.6	367.6	263.8	211.9	195.6
72.5°	379.4	300.9	209.0	169.0	164.5
75°	309.8	238.6	157.1	142.3	139.3
77.5°	246.0	180.8	123.0	114.1	111.2
80°	185.3	124.5	93.4	88.9	86.0
82.5°	127.5	77.1	66.7	62.2	62.2
85°	78.6	45.9	41.5	38.5	38.5
87.5°	35.6	19.3	19.3	17.8	16.3
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	22.21	23.77	22.58	24.08	24.39	19.58	21.14	19.95	21.45	21.77
	3H	23.99	25.39	24.37	25.71	26.08	20.69	22.09	21.07	22.42	22.78
	4H	24.65	25.96	25.05	26.31	26.69	21.09	22.40	21.49	22.75	23.13
	6H	25.13	26.34	25.54	26.71	27.10	21.41	22.62	21.82	22.99	23.38
	8H	25.28	26.44	25.71	26.83	27.23	21.52	22.67	21.94	23.06	23.46
	12H	25.38	26.49	25.81	26.87	27.30	21.59	22.70	22.02	23.08	23.51
4H	2H	22.47	23.78	22.87	24.13	24.51	20.30	21.61	20.69	21.96	22.33
	3H	24.43	25.52	24.84	25.92	26.32	21.57	22.66	21.98	23.06	23.46
	4H	25.20	26.19	25.64	26.60	27.04	22.05	23.04	22.48	23.45	23.89
	6H	25.80	26.66	26.26	27.10	27.56	22.47	23.33	22.93	23.77	24.23
	8H	25.99	26.79	26.45	27.24	27.70	22.62	23.42	23.08	23.86	24.33
	12H	26.14	26.85	26.62	27.33	27.80	22.73	23.44	23.21	23.92	24.39
8H	4H	25.26	26.06	25.72	26.50	26.97	22.37	23.17	22.84	23.62	24.08
	6H	25.92	26.58	26.42	27.07	27.55	22.89	23.55	23.38	24.04	24.52
	8H	26.15	26.75	26.67	27.26	27.74	23.09	23.68	23.60	24.19	24.68
	12H	26.36	26.88	26.86	27.37	27.94	23.26	23.79	23.77	24.28	24.84
12H	4H	25.25	25.96	25.73	26.44	26.91	22.42	23.13	22.90	23.61	24.08
	6H	25.91	26.50	26.42	27.01	27.50	22.95	23.54	23.46	24.05	24.54
	8H	26.18	26.70	26.69	27.20	27.76	23.20	23.73	23.71	24.22	24.78