

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: P243294

Luminaire Tested: S123DRP-H1000D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243294
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H1000D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

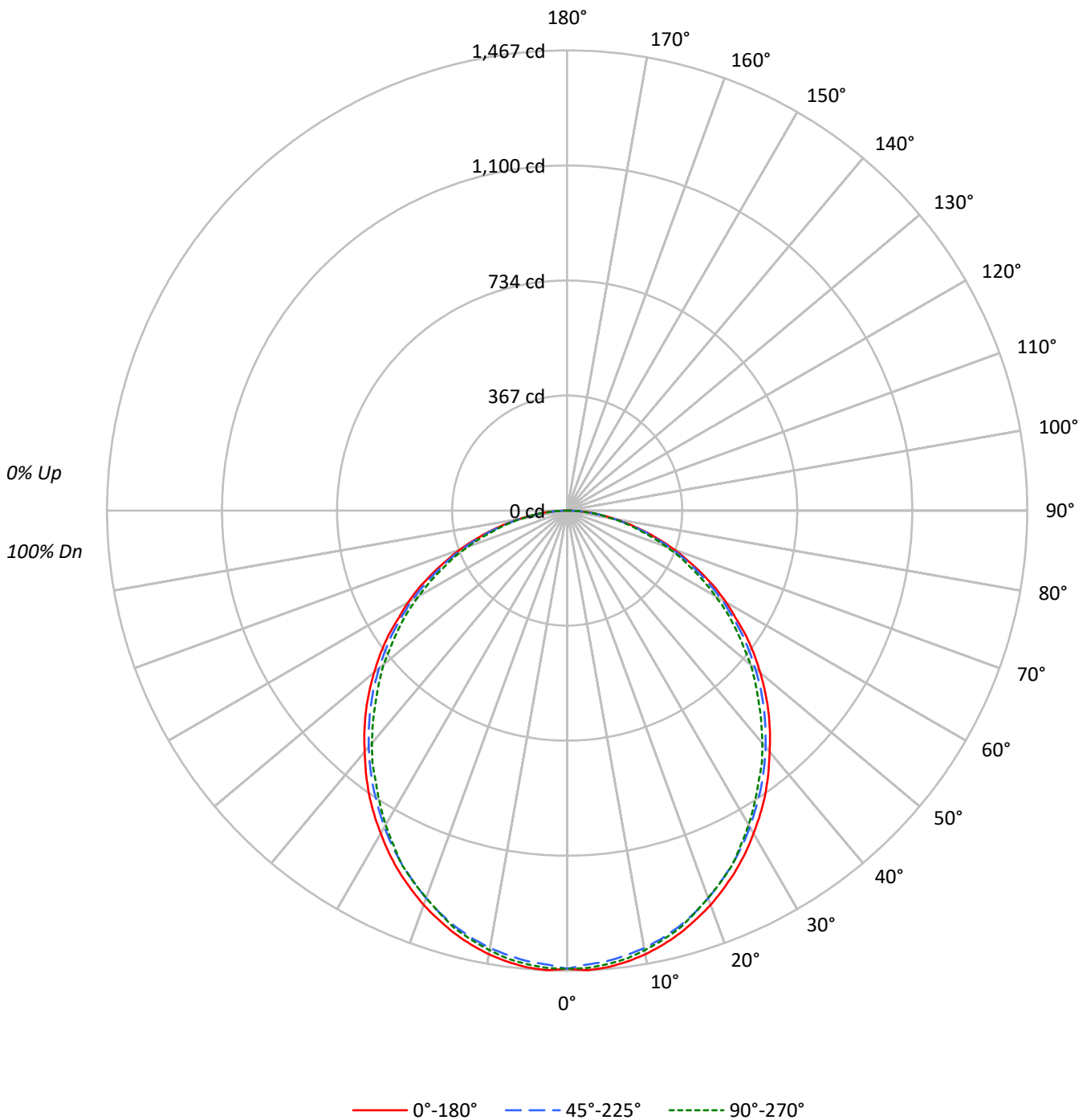
Lumens per Lamp: N/A
Luminaire Lumens: 3863.8 lumens
Efficiency: N/A
Efficacy: 122.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84					84			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70					70			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59					59			
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51					51			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44					44			
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30					30			
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27					27			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17704	17704	17704
5°	17786	17552	17668
10°	17681	17428	17517
15°	17497	17241	17316
20°	17256	16961	16946
25°	16973	16651	16667
30°	16633	16314	16195
35°	16304	15947	15715
40°	15890	15567	15318
45°	15563	15191	14799
50°	15144	14760	14396
55°	14708	14326	13842
60°	14187	13806	13253
65°	13572	13159	12605
70°	12886	12461	11947
75°	11956	11615	10996
80°	10757	10505	10170
85°	10041	9541	9207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15563 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.8	3.6
10°-20°	389.7	10.1
20°-30°	576.9	14.9
30°-40°	676.6	17.5
40°-50°	684.0	17.7
50°-60°	605.0	15.7
60°-70°	454.3	11.8
70°-80°	261.9	6.8
80°-90°	77.7	2.0
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°	1104.4	28.6
0°-40°	1781.0	46.1
0°-60°	3070.0	79.5
0°-90°	3863.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3863.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1461	1461	1461	1461	1461	
5°	1462	1456	1442	1455	1452	139
15°	1394	1387	1374	1384	1380	393
25°	1269	1260	1245	1251	1246	584
35°	1102	1092	1078	1074	1062	688
45°	908	901	886	874	863	700
55°	696	691	678	665	655	621
65°	473	470	459	447	440	469
75°	255	253	248	241	235	271
85°	72	71	69	67	66	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1460.6	1460.6	1460.6	1460.6	1460.6
2.5°	1466.6	1461.8	1448.5	1461.8	1459.4
5°	1461.8	1455.8	1442.5	1454.6	1452.1
7.5°	1450.9	1444.9	1430.5	1443.7	1441.3
10°	1436.5	1430.5	1416.0	1426.9	1423.2
12.5°	1417.2	1411.2	1396.8	1405.2	1402.8
15°	1394.3	1387.1	1373.9	1383.5	1379.9
17.5°	1366.7	1360.6	1346.2	1358.2	1347.4
20°	1337.8	1331.7	1314.9	1325.7	1313.7
22.5°	1304.0	1296.8	1280.0	1287.2	1281.2
25°	1269.1	1259.5	1245.0	1251.1	1246.2
27.5°	1230.6	1221.0	1206.5	1208.9	1200.5
30°	1188.4	1180.0	1165.6	1168.0	1157.1
32.5°	1146.3	1139.1	1121.0	1121.0	1110.2
35°	1101.8	1092.1	1077.7	1074.1	1062.0
37.5°	1053.6	1045.2	1031.9	1025.9	1018.7
40°	1004.2	999.4	983.8	976.5	968.1
42.5°	957.3	948.8	935.6	926.0	916.3
45°	907.9	900.7	886.2	874.2	863.3
47.5°	856.1	850.1	835.6	822.4	814.0
50°	803.1	798.3	782.7	768.2	763.4
52.5°	751.4	745.3	729.7	716.4	706.8
55°	696.0	691.2	677.9	664.7	655.0
57.5°	637.0	637.0	622.5	610.5	603.3
60°	585.2	579.2	569.5	556.3	546.7
62.5°	531.0	527.4	514.2	500.9	493.7
65°	473.2	469.6	458.8	446.7	439.5
67.5°	416.6	415.4	405.8	396.1	391.3
70°	363.6	361.2	351.6	342.0	337.1
72.5°	309.5	307.0	298.6	290.2	284.2
75°	255.3	252.9	248.0	240.8	234.8
77.5°	202.3	202.3	196.3	193.9	191.5
80°	154.1	152.9	150.5	148.1	145.7
82.5°	110.8	109.6	107.2	106.0	106.0
85°	72.2	71.0	68.6	67.4	66.2
87.5°	37.3	34.9	33.7	31.3	30.1
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	21.44	23.06	21.80	23.38	23.69	21.13	22.75	21.49	23.06	23.38
	3H	23.23	24.70	23.61	25.03	25.39	22.88	24.35	23.26	24.68	25.04
	4H	23.91	25.30	24.31	25.64	26.02	23.53	24.91	23.93	25.26	25.64
	6H	24.41	25.69	24.82	26.06	26.45	24.03	25.31	24.44	25.68	26.07
	8H	24.57	25.80	25.00	26.19	26.59	24.20	25.43	24.63	25.82	26.21
	12H	24.70	25.87	25.13	26.26	26.68	24.32	25.50	24.75	25.88	26.31
4H	2H	22.03	23.41	22.42	23.76	24.13	21.78	23.17	22.18	23.51	23.89
	3H	24.05	25.21	24.46	25.61	26.01	23.76	24.92	24.16	25.31	25.71
	4H	24.86	25.91	25.29	26.33	26.76	24.53	25.59	24.97	26.00	26.43
	6H	25.49	26.41	25.95	26.85	27.31	25.16	26.08	25.62	26.52	26.98
	8H	25.71	26.57	26.17	27.01	27.48	25.38	26.25	25.84	26.69	27.15
	12H	25.88	26.66	26.36	27.13	27.60	25.55	26.33	26.03	26.80	27.27
8H	4H	25.16	26.02	25.62	26.46	26.92	24.87	25.73	25.33	26.17	26.64
	6H	25.91	26.63	26.40	27.11	27.59	25.62	26.34	26.12	26.83	27.30
	8H	26.21	26.85	26.72	27.36	27.84	25.92	26.57	26.43	27.07	27.56
	12H	26.46	27.03	26.97	27.52	28.08	26.17	26.74	26.68	27.23	27.79
12H	4H	25.19	25.96	25.67	26.44	26.91	24.91	25.68	25.39	26.16	26.63
	6H	25.96	26.61	26.47	27.12	27.60	25.69	26.33	26.20	26.84	27.33
	8H	26.32	26.89	26.83	27.38	27.94	26.05	26.62	26.56	27.11	27.67