

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931344

Luminaire Tested: DFN2DS-TR3F0-040DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931344
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR3F0-040DS927-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

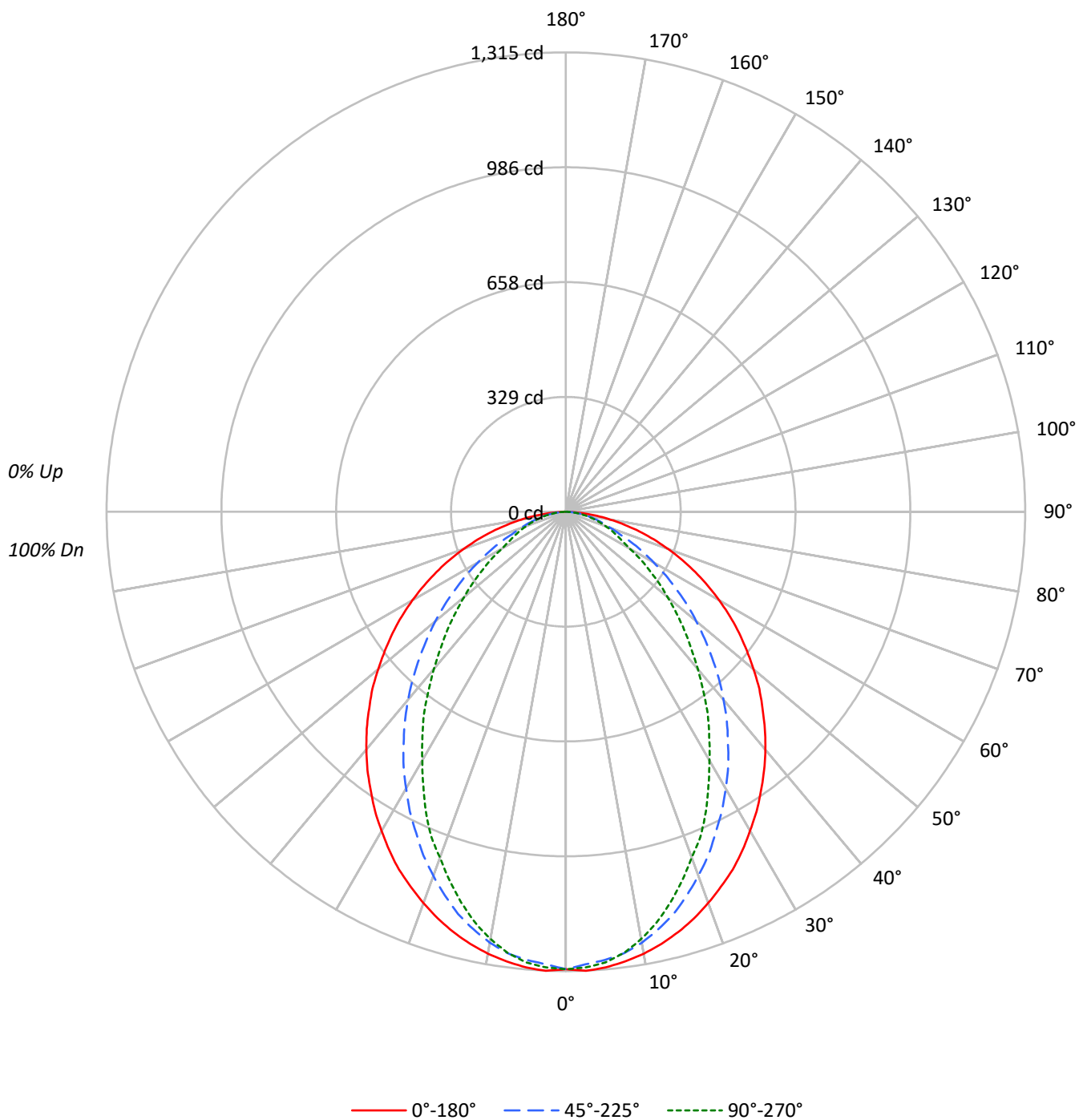
Lumens per Lamp: N/A
Luminaire Lumens: 2692.8 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 39.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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				0
RW	70	50	30	10	70	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		100
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1632	1632	1632
5°	1638	1611	1620
10°	1625	1585	1571
15°	1607	1538	1494
20°	1581	1471	1397
25°	1554	1394	1303
30°	1517	1316	1183
35°	1482	1231	1078
40°	1446	1143	956
45°	1403	1044	846
50°	1360	944	737
55°	1315	837	633
60°	1264	723	526
65°	1205	608	479
70°	1136	501	440
75°	1050	456	411
80°	926	408	375
85°	728	322	322

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1403 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.7	4.6
10°-20°	336.9	12.5
20°-30°	473.0	17.6
30°-40°	515.5	19.1
40°-50°	473.8	17.6
50°-60°	372.1	13.8
60°-70°	242.2	9.0
70°-80°	124.7	4.6
80°-90°	31.8	1.2
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°	932.5	34.6
0°-40°	1448.1	53.8
0°-60°	2294.1	85.2
0°-90°	2692.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2692.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1309	1303	1288	1299	1295	124
15°	1245	1232	1192	1170	1158	351
25°	1130	1092	1014	966	948	520
35°	974	914	809	735	708	610
45°	796	717	592	508	480	615
55°	606	513	385	314	292	541
65°	409	313	206	166	162	405
75°	218	135	95	86	85	231
85°	51	26	22	22	22	61
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1309.3	1309.3	1309.3	1309.3	1309.3
2.5°	1315.3	1309.3	1296.3	1308.2	1305.8
5°	1309.3	1303.4	1288.0	1298.6	1295.2
7.5°	1298.6	1291.6	1275.0	1279.6	1273.8
10°	1284.5	1276.1	1252.5	1248.8	1241.9
12.5°	1266.7	1256.0	1224.0	1216.9	1203.8
15°	1245.3	1232.3	1192.0	1169.5	1157.7
17.5°	1220.5	1201.5	1151.6	1125.7	1106.7
20°	1192.0	1168.3	1109.0	1079.5	1053.4
22.5°	1161.2	1134.0	1065.2	1024.9	1007.3
25°	1130.4	1092.5	1014.2	965.8	947.9
27.5°	1093.8	1053.4	966.9	911.2	883.9
30°	1054.6	1009.5	914.7	854.3	822.3
32.5°	1016.7	962.1	865.0	793.9	764.2
35°	974.1	913.6	809.3	734.7	708.5
37.5°	932.6	867.3	757.2	675.3	645.8
40°	888.7	817.7	702.7	618.6	587.7
42.5°	843.6	767.8	648.2	560.4	530.9
45°	796.3	716.8	592.5	508.3	479.9
47.5°	751.3	667.2	539.2	455.0	428.9
50°	701.5	617.4	487.0	405.2	380.4
52.5°	652.8	564.0	437.3	359.0	336.5
55°	605.5	513.1	385.1	314.0	291.5
57.5°	556.9	462.1	338.9	272.5	253.6
60°	507.1	412.3	290.3	229.9	211.0
62.5°	458.6	363.8	248.8	192.0	182.6
65°	408.8	312.8	206.2	165.9	162.3
67.5°	361.5	265.4	165.9	145.7	142.2
70°	311.7	219.2	137.4	125.6	120.8
72.5°	264.3	176.5	114.9	105.5	103.1
75°	218.0	135.0	94.8	86.5	85.4
77.5°	171.9	95.9	74.7	69.9	67.5
80°	129.1	68.7	56.8	52.2	52.2
82.5°	90.1	46.3	39.1	36.7	36.7
85°	50.9	26.1	22.5	22.5	22.5
87.5°	19.0	9.4	9.4	8.3	8.3
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	12.94	14.46	13.30	14.77	15.08	8.90	10.42	9.26	10.73	11.04
	3H	14.70	16.07	15.08	16.39	16.76	10.16	11.53	10.54	11.85	12.22
	4H	15.37	16.65	15.77	17.00	17.37	10.66	11.94	11.06	12.29	12.67
	6H	15.86	17.04	16.27	17.41	17.80	11.04	12.23	11.46	12.59	12.99
	8H	16.02	17.15	16.45	17.54	17.94	11.17	12.30	11.59	12.68	13.09
	12H	16.13	17.20	16.56	17.59	18.01	11.25	12.33	11.68	12.71	13.14
4H	2H	13.04	14.32	13.44	14.67	15.05	9.59	10.87	9.99	11.22	11.60
	3H	14.97	16.04	15.38	16.44	16.84	11.03	12.10	11.45	12.50	12.90
	4H	15.72	16.68	16.15	17.09	17.53	11.63	12.59	12.07	13.01	13.44
	6H	16.31	17.15	16.77	17.59	18.05	12.12	12.95	12.58	13.40	13.86
	8H	16.53	17.31	16.99	17.75	18.22	12.28	13.06	12.75	13.51	13.97
	12H	16.68	17.38	17.16	17.86	18.33	12.40	13.10	12.88	13.57	14.05
8H	4H	15.75	16.52	16.21	16.97	17.44	11.99	12.77	12.45	13.21	13.68
	6H	16.38	17.03	16.88	17.52	17.99	12.57	13.22	13.07	13.71	14.19
	8H	16.63	17.21	17.15	17.72	18.21	12.80	13.37	13.31	13.88	14.37
	12H	16.84	17.35	17.35	17.84	18.41	12.97	13.48	13.48	13.98	14.54
12H	4H	15.73	16.43	16.21	16.90	17.37	12.03	12.73	12.51	13.20	13.68
	6H	16.36	16.94	16.88	17.45	17.94	12.64	13.22	13.15	13.73	14.21
	8H	16.65	17.16	17.16	17.65	18.22	12.91	13.42	13.42	13.91	14.48