

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: P930438

Luminaire Tested: DFN2DS-PN2F0-030DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930438
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-PN2F0-030DS835-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

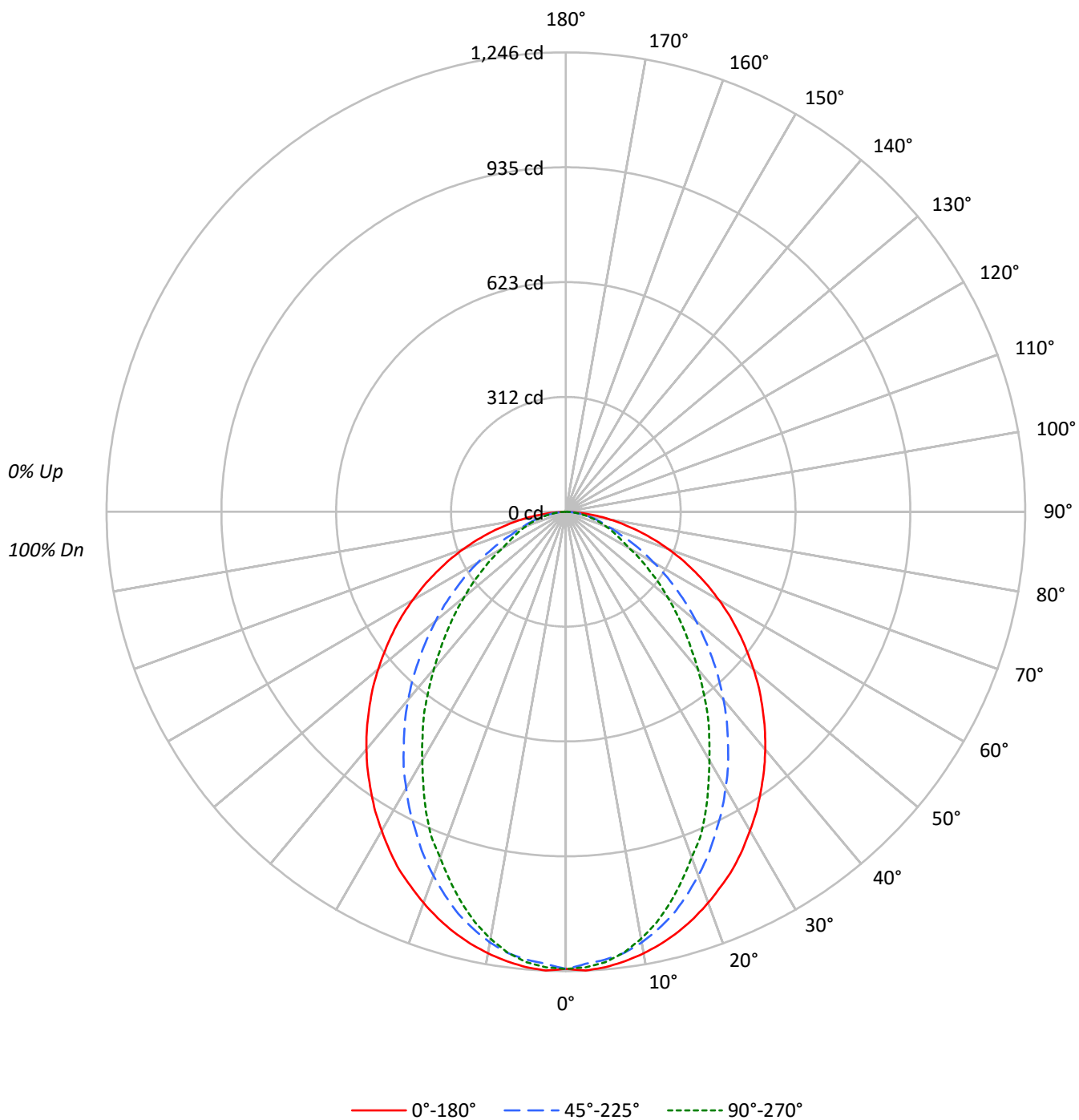
Lumens per Lamp: N/A
Luminaire Lumens: 2550.0 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2685	2685	2685
5°	2696	2652	2666
10°	2675	2609	2586
15°	2644	2531	2458
20°	2602	2421	2299
25°	2558	2295	2145
30°	2498	2166	1947
35°	2439	2026	1774
40°	2379	1881	1574
45°	2310	1719	1392
50°	2238	1554	1214
55°	2165	1377	1043
60°	2080	1191	865
65°	1984	1000	788
70°	1869	824	724
75°	1727	751	676
80°	1525	671	616
85°	1198	529	529

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2310 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	4.6
10°-20°	319.0	12.5
20°-30°	447.9	17.6
30°-40°	488.2	19.1
40°-50°	448.7	17.6
50°-60°	352.4	13.8
60°-70°	229.4	9.0
70°-80°	118.1	4.6
80°-90°	30.1	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°	883.1	34.6
0°-40°	1371.3	53.8
0°-60°	2172.4	85.2
0°-90°	2550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1240	1240	1240	1240	1240	
5°	1240	1234	1220	1230	1226	118
15°	1179	1167	1129	1108	1096	332
25°	1070	1034	960	914	898	492
35°	922	865	766	696	671	577
45°	754	679	561	481	454	582
55°	573	486	365	297	276	512
65°	387	296	195	157	154	384
75°	206	128	90	82	81	218
85°	48	25	21	21	21	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.9	1239.9	1239.9	1239.9	1239.9
2.5°	1245.5	1239.9	1227.5	1238.8	1236.6
5°	1239.9	1234.3	1219.7	1229.8	1226.4
7.5°	1229.8	1223.1	1207.4	1211.8	1206.2
10°	1216.3	1208.5	1186.1	1182.6	1176.0
12.5°	1199.5	1189.4	1159.1	1152.4	1140.0
15°	1179.3	1166.9	1128.8	1107.5	1096.3
17.5°	1155.7	1137.8	1090.6	1066.0	1048.0
20°	1128.8	1106.3	1050.2	1022.3	997.5
22.5°	1099.7	1073.8	1008.7	970.6	953.8
25°	1070.5	1034.5	960.5	914.5	897.6
27.5°	1035.7	997.5	915.6	862.9	837.0
30°	998.7	956.0	866.2	809.1	778.7
32.5°	962.7	911.1	819.2	751.8	723.7
35°	922.4	865.1	766.4	695.7	671.0
37.5°	883.1	821.3	717.0	639.5	611.6
40°	841.6	774.3	665.4	585.7	556.6
42.5°	798.9	727.2	613.8	530.7	502.7
45°	754.1	678.8	561.1	481.3	454.4
47.5°	711.4	631.8	510.6	430.8	406.2
50°	664.3	584.6	461.2	383.7	360.2
52.5°	618.2	534.1	414.1	340.0	318.7
55°	573.3	485.8	364.6	297.4	276.1
57.5°	527.4	437.6	321.0	258.1	240.1
60°	480.2	390.5	274.9	217.7	199.8
62.5°	434.3	344.5	235.6	181.8	172.9
65°	387.1	296.2	195.2	157.1	153.7
67.5°	342.3	251.3	157.1	138.0	134.6
70°	295.1	207.6	130.1	118.9	114.4
72.5°	250.2	167.1	108.8	99.9	97.6
75°	206.4	127.9	89.8	81.9	80.8
77.5°	162.7	90.8	70.7	66.2	63.9
80°	122.3	65.1	53.8	49.4	49.4
82.5°	85.2	43.8	37.0	34.8	34.8
85°	48.2	24.6	21.3	21.3	21.3
87.5°	18.0	8.9	8.9	7.9	7.9
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	14.67	16.19	15.03	16.50	16.82	10.63	12.15	10.99	12.46	12.78
	3H	16.43	17.80	16.81	18.12	18.49	11.89	13.26	12.27	13.59	13.95
	4H	17.10	18.38	17.50	18.73	19.11	12.39	13.67	12.79	14.02	14.40
	6H	17.59	18.77	18.00	19.14	19.53	12.77	13.96	13.19	14.32	14.72
	8H	17.75	18.88	18.18	19.27	19.67	12.90	14.03	13.33	14.42	14.82
	12H	17.86	18.93	18.29	19.32	19.75	12.98	14.06	13.41	14.44	14.87
4H	2H	14.77	16.05	15.17	16.40	16.78	11.32	12.60	11.72	12.95	13.33
	3H	16.70	17.77	17.11	18.17	18.57	12.77	13.83	13.18	14.23	14.63
	4H	17.45	18.41	17.89	18.83	19.26	13.36	14.32	13.80	14.74	15.18
	6H	18.05	18.88	18.50	19.32	19.78	13.85	14.68	14.31	15.13	15.59
	8H	18.26	19.04	18.72	19.48	19.95	14.02	14.79	14.48	15.24	15.70
	12H	18.41	19.11	18.89	19.59	20.06	14.13	14.83	14.61	15.31	15.78
8H	4H	17.48	18.25	17.94	18.70	19.17	13.72	14.50	14.18	14.94	15.41
	6H	18.12	18.76	18.61	19.25	19.73	14.31	14.95	14.80	15.44	15.92
	8H	18.37	18.94	18.88	19.45	19.94	14.53	15.10	15.04	15.61	16.10
	12H	18.57	19.08	19.08	19.57	20.14	14.71	15.22	15.22	15.71	16.27
12H	4H	17.46	18.16	17.94	18.63	19.11	13.76	14.46	14.24	14.93	15.41
	6H	18.10	18.67	18.61	19.18	19.67	14.37	14.95	14.88	15.46	15.94
	8H	18.38	18.89	18.89	19.38	19.95	14.64	15.15	15.15	15.64	16.21