

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: P931263

Luminaire Tested: DFN2DS-TR2F0-040DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931263
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR2F0-040DS830-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

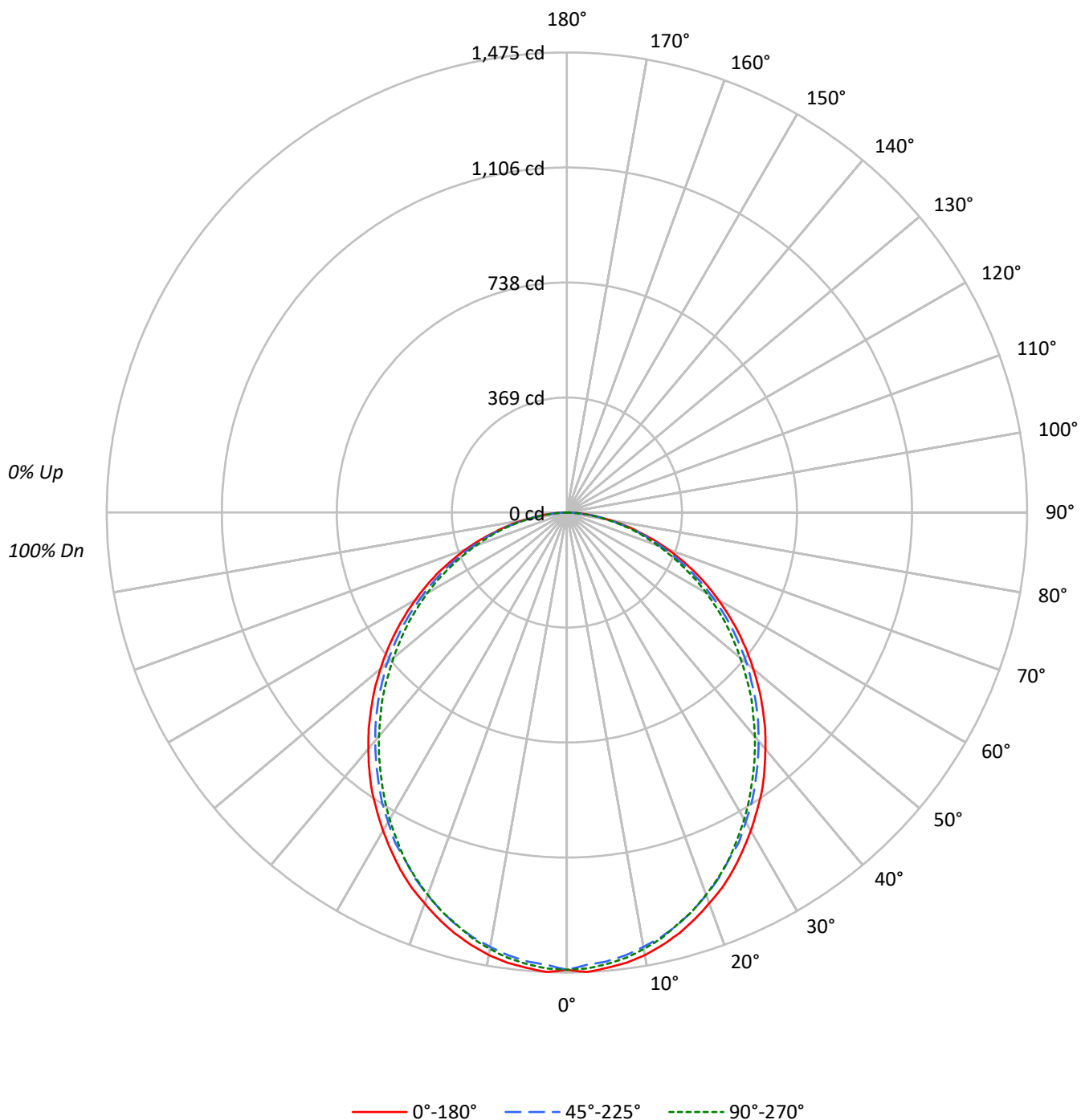
Lumens per Lamp: N/A
Luminaire Lumens: 3730.3 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3270	3270	3270
5°	3283	3235	3255
10°	3263	3203	3219
15°	3223	3161	3158
20°	3165	3099	3096
25°	3108	3022	3022
30°	3035	2952	2927
35°	2967	2868	2825
40°	2882	2783	2730
45°	2797	2699	2633
50°	2705	2612	2519
55°	2610	2511	2418
60°	2503	2390	2302
65°	2389	2269	2165
70°	2243	2123	2023
75°	2041	1955	1908
80°	1811	1756	1666
85°	1477	1408	1264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2797 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.0	3.7
10°-20°	388.3	10.4
20°-30°	570.6	15.3
30°-40°	662.7	17.8
40°-50°	661.9	17.7
50°-60°	577.1	15.5
60°-70°	426.6	11.4
70°-80°	241.4	6.5
80°-90°	63.7	1.7
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°	1096.8	29.4
0°-40°	1759.5	47.2
0°-60°	2998.6	80.4
0°-90°	3730.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3730.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1466	1461	1445	1456	1454	139
15°	1396	1387	1369	1375	1368	393
25°	1263	1252	1228	1231	1228	581
35°	1090	1076	1053	1045	1038	681
45°	887	877	856	840	835	684
55°	671	663	646	629	622	600
65°	453	444	430	417	410	447
75°	237	234	227	218	221	253
85°	58	56	55	51	49	68
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1466.1	1466.1	1466.1	1466.1	1466.1
2.5°	1474.7	1467.6	1452.1	1466.1	1463.5
5°	1466.1	1460.6	1445.0	1456.2	1453.6
7.5°	1456.2	1447.9	1432.3	1443.7	1440.9
10°	1440.9	1431.0	1414.1	1425.3	1421.1
12.5°	1419.6	1411.2	1394.3	1401.4	1398.5
15°	1395.7	1387.3	1368.9	1374.6	1367.6
17.5°	1366.1	1357.7	1339.3	1346.3	1339.3
20°	1333.6	1325.2	1305.5	1309.7	1304.2
22.5°	1301.3	1288.6	1270.2	1270.2	1267.4
25°	1263.1	1251.9	1228.0	1230.7	1228.0
27.5°	1220.8	1210.9	1192.8	1188.5	1181.6
30°	1178.6	1167.3	1146.2	1142.0	1136.3
32.5°	1133.5	1125.1	1102.5	1094.0	1088.3
35°	1089.8	1075.8	1053.2	1044.7	1037.6
37.5°	1040.4	1027.7	1005.1	995.3	988.3
40°	989.8	978.4	955.8	943.2	937.6
42.5°	940.4	929.0	906.6	892.4	884.0
45°	886.8	877.0	855.7	840.4	834.6
47.5°	834.6	824.7	802.2	786.7	778.3
50°	779.6	772.5	752.8	733.1	726.0
52.5°	726.0	716.2	697.9	682.4	672.5
55°	671.2	662.6	645.7	628.8	621.8
57.5°	616.1	609.1	590.6	573.8	568.1
60°	561.1	555.5	535.8	520.3	516.0
62.5°	507.5	497.7	483.6	469.5	463.8
65°	452.6	444.1	430.0	417.3	410.3
67.5°	396.2	389.0	376.5	366.6	361.0
70°	344.0	338.4	325.6	315.8	310.2
72.5°	290.5	284.8	277.8	267.9	263.7
75°	236.8	234.1	226.9	218.5	221.4
77.5°	188.9	183.2	180.4	176.2	172.0
80°	141.0	139.5	136.7	132.5	129.7
82.5°	95.9	95.9	94.6	88.8	88.8
85°	57.7	56.4	55.0	50.7	49.4
87.5°	25.4	22.6	19.8	15.5	14.0
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	15.40	17.01	15.76	17.32	17.64	14.96	16.57	15.32	16.88	17.19
	3H	17.15	18.60	17.53	18.93	19.29	16.66	18.11	17.04	18.44	18.80
	4H	17.80	19.16	18.19	19.51	19.89	17.30	18.67	17.70	19.02	19.39
	6H	18.26	19.53	18.68	19.90	20.29	17.76	19.03	18.17	19.40	19.79
	8H	18.41	19.62	18.83	20.01	20.41	17.90	19.12	18.33	19.50	19.90
	12H	18.50	19.66	18.93	20.04	20.47	17.99	19.15	18.42	19.53	19.96
4H	2H	15.96	17.33	16.36	17.68	18.05	15.61	16.98	16.01	17.32	17.70
	3H	17.93	19.08	18.34	19.48	19.88	17.53	18.67	17.94	19.07	19.47
	4H	18.71	19.75	19.14	20.16	20.60	18.29	19.32	18.72	19.74	20.17
	6H	19.31	20.21	19.76	20.65	21.11	18.88	19.78	19.33	20.22	20.68
	8H	19.50	20.34	19.96	20.79	21.25	19.06	19.91	19.52	20.35	20.81
	12H	19.63	20.39	20.11	20.86	21.33	19.18	19.94	19.66	20.41	20.88
8H	4H	18.98	19.83	19.45	20.27	20.74	18.61	19.46	19.07	19.90	20.36
	6H	19.70	20.40	20.19	20.89	21.37	19.32	20.02	19.81	20.51	20.98
	8H	19.96	20.59	20.47	21.10	21.58	19.57	20.20	20.08	20.70	21.19
	12H	20.16	20.72	20.66	21.21	21.77	19.74	20.30	20.25	20.79	21.35
12H	4H	19.01	19.77	19.49	20.25	20.72	18.65	19.41	19.13	19.88	20.35
	6H	19.74	20.38	20.25	20.88	21.37	19.38	20.01	19.89	20.51	21.00
	8H	20.06	20.62	20.56	21.11	21.67	19.68	20.24	20.19	20.73	21.29